3.18 Wetlands and Other Waters

3.18.1 Regulatory Setting

Wetlands and other waters are protected under a number of laws and regulations. At the federal level, the Federal Water Pollution Control Act, more commonly referred to as the Clean Water Act (CWA) (33 United States Code [USC] 1344), is the primary law regulating wetlands and surface waters. Under Section 404 of the CWA, the discharge of dredged or fill material into waters of the United States including wetlands, is regulated by the United States Army Corps of Engineers. Waters of the United States include navigable waters, interstate waters, territorial seas and other waters that may be used in interstate or foreign commerce.

Section 404 of the CWA prohibits the proposed discharge of dredged or fill material into waters of the United States if a practicable alternative exists that is less damaging to the aquatic environment, so long as it does not result in other significant adverse environmental consequences.

There are two broad categories of USACE permits: general and individual permits. Within these two categories, there are several types of permits the USACE issues, including standard individual permits (SIPs), Letters of Permission (LOPs), programmatic or regional general permits (PGPs or RGPs), and nationwide permits (NWPs). Ordinarily, projects that do not meet the criteria for a general permit, which is the most expedient type of authorization, must be permitted under an individual permit. For SIPs that propose a discharge of dredged or fill material in waters of the United States, the applicant must demonstrate to the USACE that the proposed discharge complies with the United States Environmental Protection Agency's (EPA's) Section 404(b)(1) Guidelines (EPA 40 CFR Part 230). Federal regulations also require the USACE to evaluate and consider all relevant public interest factors in determining whether the proposed action is contrary to the public interest. The Guidelines stipulate that USACE may not issue a permit if there is a practicable alternative to the proposed discharge that would have fewer adverse effects on waters of the U.S, as long as it does not have other significant environmental consequences. Similarly, the USACE may not issue a permit if the proposed action is contrary to the public interest.

Caltrans, the Federal Highway Administration (FHWA), the USACE, the United States EPA, and the United States Fish and Wildlife Service (USFWS) entered into a memorandum of understanding (MOU) to integrate the National Environmental

Policy Act (NEPA) and the CWA for Environmental Impact Statement (EIS) projects that have five or more acres of permanent impact to waters of the United States. Under this Memorandum of Understanding, the signatory agencies agree to coordinate at three checkpoints: (1) purpose and need, (2) identification of range of alternatives, and 3) preliminary determination of the LEDPA and conceptual mitigation plan. The goal of the MOU process is to allow the USACE to more efficiently adopt FHWA's EIS for their Section 404 permit action.

The Executive Order for the Protection of Wetlands (EO 11990) also regulates the activities of federal agencies with regard to wetlands. Essentially, EO 11990 states that a federal agency, such as FHWA and/or Caltrans, as assigned, cannot undertake or provide assistance for new construction located in wetlands unless the head of the agency finds: (1) that there is no practicable alternative to the construction, and (2) the proposed project includes all practicable measures to minimize harm.

At the state level, wetlands and waters are regulated primarily by the State Water Resources Control Board (SWRCB), the Regional Water Quality Control Boards (RWQCBs), and the California Department of Fish and Wildlife (CDFW). In certain circumstances, the Coastal Commission (or Bay Conservation and Development Commission or the Tahoe Regional Planning Agency) may also be involved. Sections 1600-1607 of the California Fish and Game Code require any agency that proposes a project that will substantially divert or obstruct the natural flow of or substantially change the bed or bank of a river, stream, or lake to notify CDFW before beginning construction. If CDFW determines that the project may substantially and adversely affect fish or wildlife resources, a Lake or Streambed Alteration Agreement will be required. CDFW jurisdictional limits are usually defined by the tops of the stream or lake banks, or the outer edge of riparian vegetation, whichever is wider. Wetlands under jurisdiction of the USACE may or may not be included in the area covered by a Streambed Alteration Agreement obtained from the CDFW.

The RWQCBs were established under the Porter-Cologne Water Quality Control Act to oversee water quality. Discharges under the Porter-Cologne Act are permitted by Waste Discharge Requirements (WDRs). A Report of Waste Discharge may be required when the discharge is not already subject to the CWA. In compliance with Section 401 of the CWA, the RWQCBs also issue water quality certifications for activities which may result in a discharge to waters of the United States This is most frequently required in tandem with a Section 404 permit request. Please see Section 3.10, Water Quality and Storm Water Runoff, for more details.

3.18.2 Affected Environment

This Wetlands and Other Waters section focuses on the issues covered in the *Supplement to the Natural Environment Study* (December 2011), the *Natural Environment Study* (NES) (July 2008), *Supplemental Jurisdictional Delineation for Mid County Parkway* (October 2011; Appendix C of the *Supplement to the Natural Environment Study*), the *Jurisdictional Delineation and Assessment Report* (2007; Revised February 2008; updated December 2013; and the *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* (United States Army Corps of Engineers [USACE] Engineer Research and Development Center, Smith 2011; Appendix G of the *Supplement to the Natural Environment Study*).

Detailed discussions and maps of identified jurisdictional features are provided in the updated *Jurisdictional Delineation and Assessment Report* (December 2013) and the *Supplemental Jurisdictional Delineation for Mid County Parkway*. The draft 404(b)(1) Alternatives Analysis was provided in Appendix M, Draft 404(b)(1) Alternatives Analysis in the Recirculated Draft EIR/Supplemental Draft EIS, and the Conceptual Mitigation Plan was provided in Appendix P, Conceptual Mitigation Plan in the Recirculated Draft EIR/Supplemental Draft EIS. The Draft 404(b)(1) Alternatives Analysis in Appendix M has been updated in this Final EIR/EIS with the Mid County Parkway Preferred Alternative/Preliminary LEDPA Identification (NEPA/404 Checkpoint 3) (December 18, 2013). The Conceptual Mitigation Plan in Appendix P has been replaced in this Final EIR/EIS with the Habitat Mitigation and Monitoring Plan (HMMP) for USACE Jurisdictional Waters.

Throughout most of the project area, the jurisdictional waters consist of ephemeral and intermittent channelized drainage courses that were either created to manage irrigation runoff or are derived from natural runoff channels. A few small, ephemeral, natural drainage courses remain in patches of undisturbed land south of Lake Perris. The central segment of the alignments of the MCP Build Alternatives crosses the San Jacinto River, which is also channelized. Although this part of the San Jacinto River is ephemeral, there is sufficient water, including irrigation runoff, to support weedy, herbaceous hydrophytic vegetation. There is also some scattered woody riparian vegetation on the banks of the River. At the east end of the MCP alignment, the proposed SR-79 interchange intersects the San Jacinto River, as well as the Massacre Canyon/Potrero Creek alluvial fan system draining from the north. These drainages are ephemeral and extensively channelized, and do not meet wetland criteria.

However, south of the San Jacinto River, in its historic floodplain, several agricultural and other drainage channels, as well as adjacent low-lying areas, accumulate sufficient water to support hydrophytic vegetation and are considered wetlands. Some of these wetlands are represented by substantial stands of woody riparian vegetation. The following information describes the project reaches and the land uses, vegetation, and water resources along those reaches. This information is from Section 4.2 in the HMMP for USACE Jurisdictional Waters, provided in Appendix P of the Final EIR/EIS):

REACH 6: Reach 6, the western segment of the MCP project, extends east across the Perris Valley, from the City of Perris to Lake Perris. The waters in these areas are mostly dry, unvegetated roadside ditches. The land cover along this Reach is mainly developed and ruderal, and the remaining land with vegetation consists of cropland and scattered components of nonnative grassland and Riversidean sage scrub.

The largest jurisdictional feature within this reach is the Perris Valley Storm Drain, which is a major tributary of the San Jacinto River and drains approximately 85 square miles in the Perris and Moreno Valleys. The Perris Valley Storm Drain is dominated by urban runoff and contains pockets of wetland throughout its extent. Segments of the Perris Valley Storm Drain consist of freshwater marsh and emergent wetland, although most of the area is relatively sparsely vegetated with ruderal vegetation due to regular maintenance by the Riverside County Flood Control District.

REACH 7: Reach 7 is in the San Jacinto Valley extending along Ramona Expressway from immediately south of Lake Perris to Warren Road. The land uses along this reach consist primarily of cropland and livestock feed yards. It also includes the San Jacinto River crossing in the Lakeview area. Most of the drainages along this reach are in agricultural areas and are ephemeral stream courses intersected by Ramona Expressway. Other than at the San Jacinto River (which contains some marsh and sparsely vegetated riparian scrub), the drainages contain no riparian vegetation on distinct differences in vegetation from the adjacent upland areas.

REACH 8: Reach 8 is also in the San Jacinto Valley extending along Ramona Expressway from Warren Road to SR-79, and includes the San Jacinto River, agricultural ditches south of the river, and drainage from Potrero Creek (northeast of the SR-79 crossing of the San Jacinto River). The jurisdictional features within Reach 8 are mostly ephemeral drainages within cropland and developed areas. Areas

within and immediately south of the San Jacinto River contain riparian forest. However, other vegetative components in undeveloped areas along this reach include Riversidean alluvial fan scrub, alkali grassland, and freshwater marsh. Wetlands in Reach 8 primarily consist of agricultural ditches and ponds.

3.18.2.1 United States Army Corps of Engineers and California Department of Fish and Wildlife Jurisdiction

Areas under the jurisdiction of USACE differ from those under the jurisdiction of CDFW; therefore, the following text describes the basis of the USACE and CDFW jurisdictions over various waters.

USACE jurisdiction extends laterally to the ordinary high water mark or beyond the ordinary high water mark to the limit of any adjacent wetlands, if present. The ordinary high water mark is defined as "… that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding area."

In this section, USACE jurisdictional areas are described as either wetland or nonwetland waters of the United States. The USACE defines wetlands as "… those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions." To satisfy the USACE wetland definition, an area must possess three wetland characteristics: (1) hydrophytic vegetation,[1] (2) hydric soils,[2] and (3) wetland hydrology.[3] Generally, nonwetland waters of the United States are those streams or drainages that exhibit an ordinary high water mark but do not meet the definition of a wetland and can include perennial, intermittent, and ephemeral drainages. Non-

[1] Plant life that grows, and is typically adapted for life, in permanently or periodically saturated soils.

[2] Soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions (i.e., absence of oxygen) in the upper part.

[3] Areas with wetland hydrology are those where the presence of water has an overriding influence on vegetation and soil characteristics due to anaerobic and reducing conditions, respectively.

wetland waters of the United States are still regulated by the USACE when they have a surface hydrologic connection to a traditional navigable water (TNW) (in this case, the Pacific Ocean) and when the surface hydrologic connection provides a significant nexus to the downstream TNW. In other words, when it can be demonstrated the waterway contributes to the biological, chemical, and/or physical integrity of a TNW. Note that a consistent ordinary high water mark is not needed for a significant nexus to exist..

CDFW regulates rivers and streams, which are defined as "…a body of water that flows perennially or episodically and that is defined by the area in which water currently flows, or has flowed, over a given course during the historic hydrologic regime, and where the width of its course can reasonably be identified by physical or biological indicators." CDFW regulates wetland areas only to the extent that those wetlands are part of a river, stream, or lake as defined by CDFW. The CDFW has not defined wetlands for jurisdictional purposes. CDFW generally includes, within the jurisdictional limits of streams and lakes, any riparian habitat present. Riparian habitat includes willows, alders, and other vegetation typically associated with the banks of a stream or lake shoreline. In most situations, wetlands associated with a stream or lake would fall within the limits of riparian habitat. Thus, defining the limits of CDFW jurisdiction based on riparian habitat will automatically include any wetland areas. Wetlands not associated with a lake, stream, or other regulated area are generally not subject to CDFW jurisdiction.

Typically, USACE jurisdictional areas are located within CDFW jurisdictional areas, because CDFW jurisdiction often extends to riparian areas that lack evidence of an ordinary high water mark or one or more of the requisite wetland criteria (hydrology, hydric soils, hydrophytic vegetation) and, therefore, are not regulated by USACE. Therefore, USACE jurisdictional areas are usually smaller areas located within CDFW jurisdictional areas.

The USACE reviewed the *Jurisdictional Delineation and Assessment Report* and issued its verification of the report by letter, dated April 10, 2008. Because the April 2008 verification expired in April 2013, the *Jurisdictional Delineation and Assessment Report* was updated in December 2013. A Preliminary Jurisdictional Determination was issued by the USACE on December 18, 2013 (see USACE Letter in Appendix J-3).

Other correspondence between FHWA, Caltrans, USACE, USEPA, and USFWS regarding the NEPA/404 Integration MOU checkpoints (Checkpoint 1 – Purpose and Need, Checkpoint 2 – Range of Alternatives, and Checkpoint 3 – Preliminary LEDPA) is also included in Appendix J.

3.18.2.2 Jurisdictional Areas in the MCP Study Area

The MCP study area for jurisdictional areas is based on drainage patterns in the vicinity of the MCP project footprint. Therefore, the MCP study area for jurisdictional areas is slightly different than the Biological Study Area (BSA) for other biological resources. The MCP study area is located within the San Jacinto River watershed. The hydrologic unit within which the MCP study area lies is the San Jacinto Valley Hydrologic Unit, which is further divided into Hydrologic Areas and Hydrologic Sub-Areas.

The MCP study area is located within the following Hydrologic Sub-Areas within the San Jacinto Valley Hydrologic Unit: Perris Valley Hydrologic Sub-Area, Lakeview Hydrologic Sub-Area, Hemet Hydrologic Sub-Area, and Gilman Hot Springs Hydrologic Sub-Area.

For ease of discussion, the *Jurisdictional Delineation and Assessment Report* divided the study area into geographic "Reaches," as shown in Figures 3.18.1, USACE Jurisdictional Areas, and 3.18.2, CDFW Jurisdictional Areas. A reach is an area encompassing a group of drainage systems. The delineation of each reach for the MCP project was based on drainage patterns and functional similarity of wetland areas. Reaches defined in the Jurisdictional Delineation are different from the "riparian reaches" described in USACE reports (refer to the discussion later in Section 3.18.2.4, Watershed Level Functions and Conditions Assessment). During the field surveys for the MCP delineation, numerous distinct jurisdictional features were identified within the MCP study area and included perennial, ephemeral, and intermittent drainages and wetlands. The MCP study area contains approximately 60 acres (ac) of USACE jurisdictional waters, of which approximately 24 acres consist of wetlands, as shown in Appendix M. The study area also contains approximately 73 acres of CDFW jurisdictional area.

The average historic annual rainfall in the City of Perris in the study area is 10.4 inches (in), per the Western Regional Climate Center (http://www.wrcc.dri.edu/htmlfiles/ca/ca.ppt.html, accessed November 14, 2011). Within the BSA for the MCP

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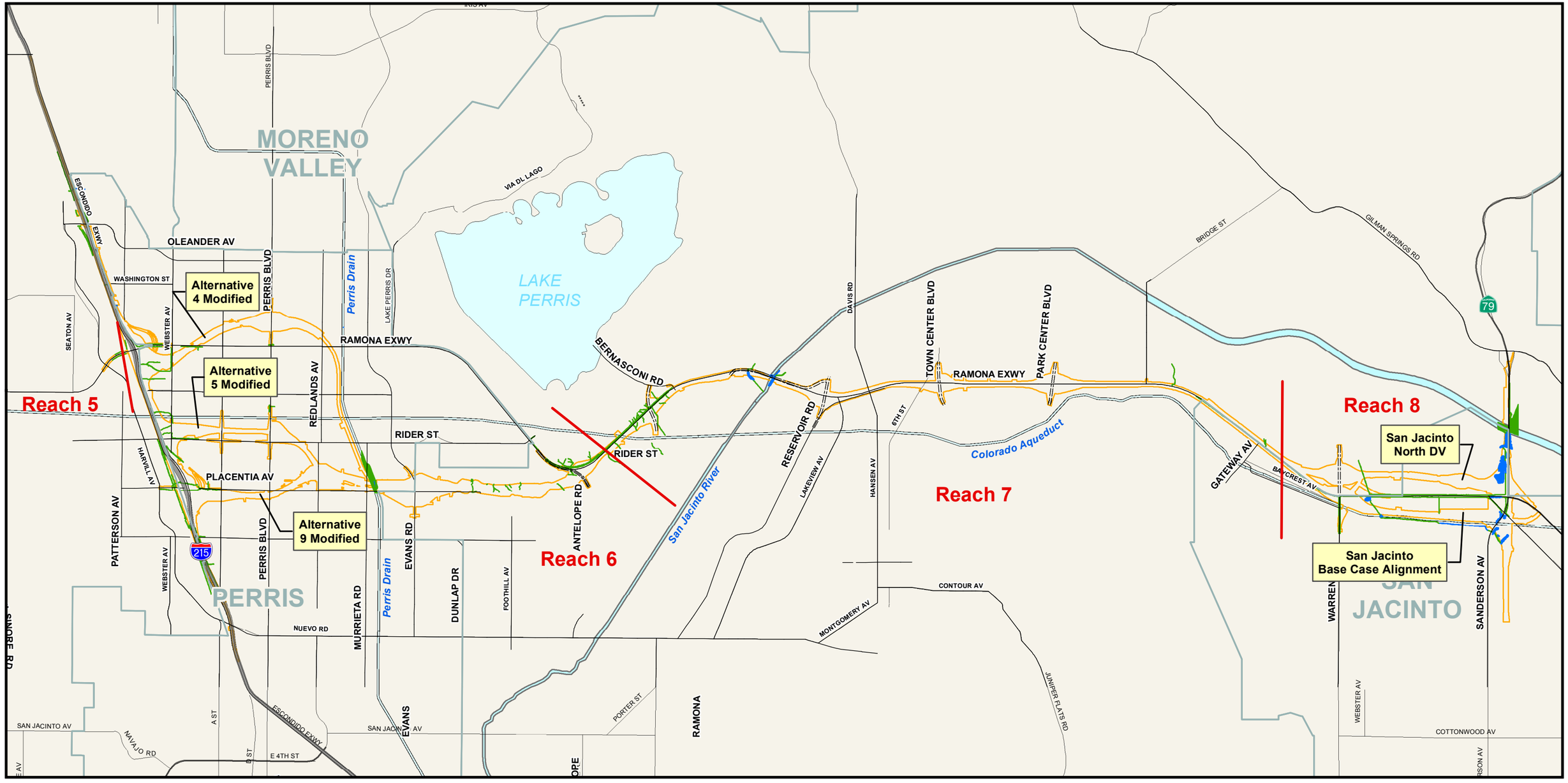

LEGEND

- Limits of Proposed Improvements (All Alternatives and Design Variations)
- 4 — Alternative(s) Modified
- Reach Boundary
- USACE Waters of the U.S.
  - Non-Wetland
  - Wetland
- City Boundary

FIGURE 3.18.1

SOURCE: TBM (2010), Jacobs Engineering (2011)

0 0.5 1 Miles

USACE Jurisdictional Areas

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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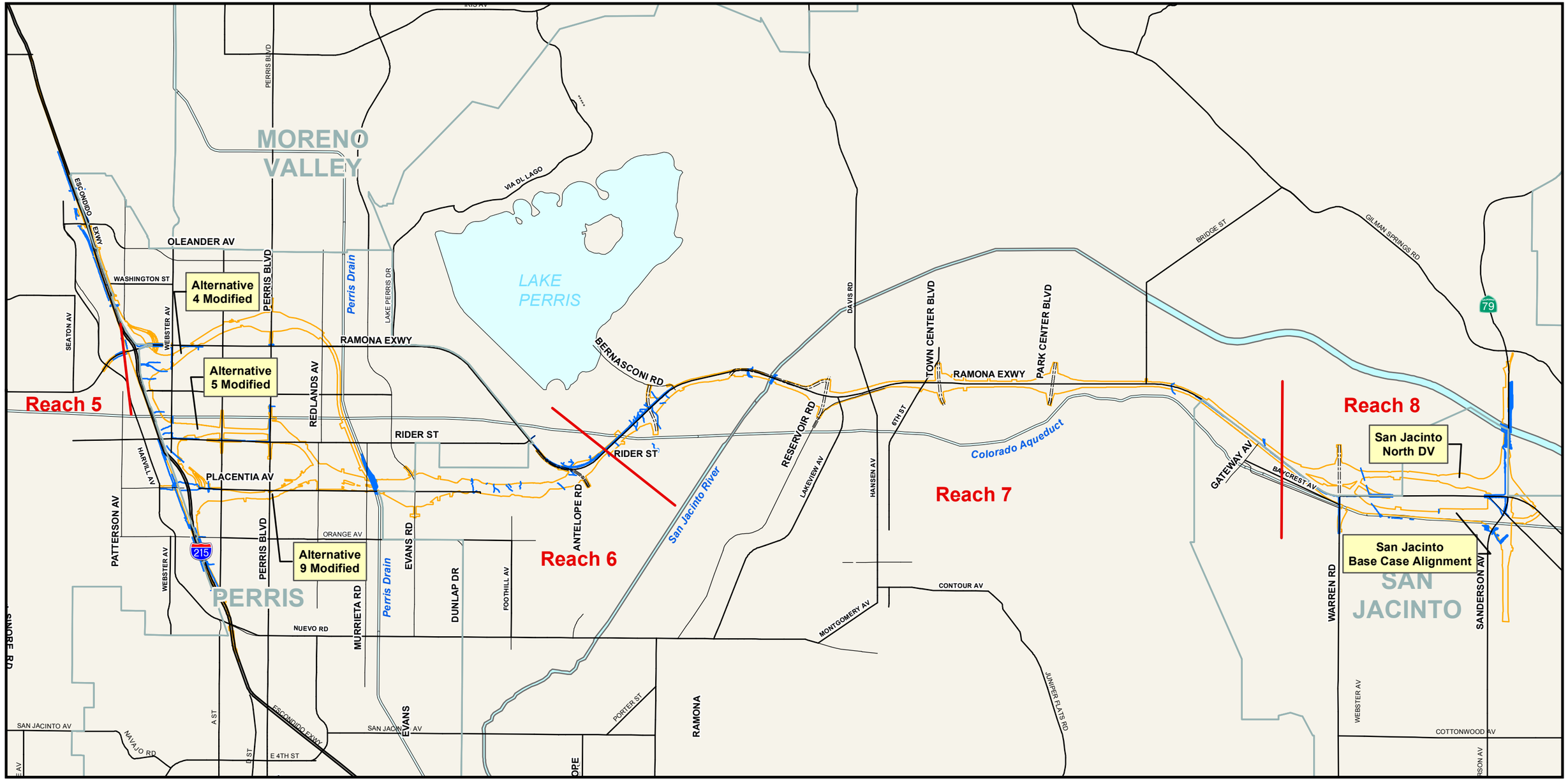

LEGEND

- Limits of Proposed Improvements (All Alternatives and Design Variations)
- CDFW Jurisdictional Waters
- City Boundary
- 4 — Alternative(s) Modified
- Reach Boundary

FIGURE 3.18.2

SOURCE: TBM (2010), Jacobs Engineering (2011)

0 0.5 1 Miles

CDFW Jurisdictional Areas

08-RIV-MCP PM 0.0/16.3; 08-RIV-215 PM 28.0/34.3
EA 08-0F3200 (PN 0800000125)

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project, the total impervious surfaces associated with developed areas (as described in the *Supplement to the Natural Environment Study*) are less than 30 percent.

3.18.2.3 Wetland Functions

A functional wetland assessment identifies the existing functions provided by wetlands within a project area, and assesses the quality of the function provided. The functions of the identified wetlands within the MCP study area initially were qualitatively assessed in the Jurisdictional Delineation using the functions described in *Wetland Evaluation Technique* (WET) (Adamus et al. 1987). This methodology provides a cursory understanding of the quality of the functions of the wetlands affected by each of the Build Alternatives. The WET manual describes several functions of wetlands considered beneficial to society, including groundwater recharge/discharge, flood flow alteration, sedimentation stabilization, sediment/ toxicant retention, nutrient removal/transformation, production export, and wildlife habitat. The results of the functions assessment are summarized in Table 3.18.A for the three reaches and associated alternatives. As shown, Reaches 5, 6, 7, and 8 are associated with Alternatives 4 Modified, 5 Modified, and 9 Modified and their respective design variations. The ranking of quality (high, moderate, and low) correlates directly with the functions that collectively exist within each reach within the MCP study area for each Build Alternative.

Table 3.18.A Wetlands Functions

Jurisdictional Delineation Reach	Reach 5	Reach 6	Reach 7	Reach 8
Build Alternatives	**4 Modified, 5 Modified, 9 Modified**	**4 Modified, 5 Modified, 9 Modified**	**4, Modified, 5 Modified, 9 Modified**	**4 Modified, 5 Modified, 9 Modified**
Function				
Groundwater Discharge/Recharge	*Absent*	Low	Moderate	Moderate
Flood Flow Alteration	*Absent*	Low	Moderate	High
Sediment Stabilization	*Absent*	Low	Moderate	Moderate
Sediment/Toxicant Retention	*Absent*	Moderate	Moderate	High
Nutrient Removal/Transformation	*Absent*	Moderate	High	High
Production Export	*Absent*	Low	Low	High
Wildlife Habitat	*Absent*	Low	Moderate	Moderate
Uniqueness/Heritage	*Absent*	Low	Moderate	Moderate
Recreation	*Absent*	Low	Low	Low

Source: *Jurisdictional Delineation and Assessment Report, Mid County Parkway* (February 2008); and modified from the *Supplement to the Natural Environment Study* (December 2011).

The Build Alternatives cross all three reaches, which results in shared wetland qualities as well. Functions with mostly high ratings per reach are associated with high wetlands quality; these occur in mostly undisturbed and undeveloped areas on Reach 8. The functions and values with mostly low ratings per reach are associated with low wetlands quality; these occur primarily in developed areas or adjacent to developed areas on Reach 6. All reaches are within the common alignment of all three Build Alternatives and result in shared wetland qualities as well. All of the alternatives contain some high-quality wetlands.

3.18.2.4 Watershed Level and Riparian Ecosystem Integrity Assessment

The waters of the United States and riparian ecosystems in the MCP were further assessed at a watershed level using a suite of hydrologic, water quality, and habitat integrity indicators identified in the report titled *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California*. This report provides an integrated measure of riparian ecosystem quality and quantity in a riparian reach which augments the findings in the *Jurisdictional Delineation and Assessment Report*. These two methods are complementary and not mutually exclusive. They can be used together by the agency decision-makers in evaluating impacts of various alternatives, and the riparian ecosystem integrity assessment can also be useful for identifying potential mitigation options.

Riparian ecosystem integrity was assessed by first identifying "riparian reach"[1] assessment units and then assessing each riparian reach using a suite of hydrologic, water quality, and habitat integrity indicators, as described by Smith (2003, 2006). The boundaries of the aquatic resources study area included not only the riparian reaches that are in the direct impact area of the Build Alternatives, but also included (for indirect and cumulative effects) the local drainage and drainage basin of each riparian reach.

[1] A riparian reach was defined as a segment of the main stem, bankfull stream channel and the adjacent riparian ecosystem exhibiting relatively homogenous characteristics with respect to geology, geomorphology, channel morphology, substrate type, vegetation communities, and cultural alteration.

3.18.3 Environmental Consequences

Initial design of the MCP Build Alternatives focused on avoidance of waters and wetlands while still meeting Caltrans geometric design standards. The USACE *Special Area Management Plan*[1] data for this area were initially used, which provided a landscape-level view of the waters and wetlands within the MCP study area. The MCP Build Alternatives were aligned to avoid these areas as much as possible. In locations where full avoidance alignments were not practical, bridges were used to avoid the waters and wetlands. When the draft *Jurisdictional Delineation and Assessment Report* was completed, the project-specific data were compared with the *Special Area Management Plan* data to ensure waters and wetlands were avoided as much as possible. A summary table of bridge descriptions and avoidance of jurisdictional areas is included in Appendix I, Supplemental Chapter 2 Attachments, Attachment D.

3.18.3.1 Permanent Impacts

Build Alternatives

Table 3.18.B summarizes the acres of impacts to CDFW jurisdictional riparian habitat and streambeds, and wetlands and nonwetland waters under the USACE jurisdiction for Alternatives 4 Modified, 5 Modified, and 9 Modified and their design variations. Permanent impacts to jurisdictional areas include all fill material within the grading limits and also include a conservative estimate of the bridge footprint area (10 percent, worst-case) to account for the construction of bridges, footings, and columns that may be placed in jurisdictional areas. Based on the final design for several recent projects in Riverside County (most recently RCTC's State Route 91 (SR-91) Corridor Improvement Project) with bridges over jurisdictional waters, permanent impacts based upon final design would likely be less than 10 percent; however, to provide a conservative estimate, the bridge supports are estimated to affect 10 percent of the total bridge footprint. Permanent impacts include both direct and indirect impacts. A qualitative discussion of indirect impacts is provided later in Section 3.18.3.2, Watershed Level Riparian Ecosystem Integrity Assessment of Impacts. Additionally, riparian habitats beneath the bridged areas are considered permanent impacts, due to shading effects.

[1] USACE initiated a Riverside County Special Area Management Plan (SAMP) in 2002 in coordination with the Riverside County Integrated Project. Although not yet approved, data collected for the SAMP was made available to RCTC for use on the MCP project.

Table 3.18.B Impacts to Wetlands and Other Jurisdictional Areas

Modified Alternative/ Design Variation	Permanent Impacts (acres)[1]			
	CDFW	USACE		
		Nonwetlands	Wetlands	Total
Alternative 4 Modified	9.23	5.01	2.18	7.19
Alternative 4 Modified SJN DV	8.90	4.55	2.04	6.59
Alternative 4 Modified SJRB DV	9.23	5.01	2.18	7.19
Alternative 5 Modified	9.19	5.18	2.11	7.29
Alternative 5 Modified SJN DV	8.85	4.73	1.97	6.70
Alternative 5 Modified SJRB DV	9.19	5.18	2.11	7.29
Alternative 9 Modified	9.00	5.03	2.15	7.17
Alternative 9 Modified SJN DV	8.66	4.58	2.01	6.59
Alternative 9 Modified SJRB DV	9.00	5.03	2.15	7.17

Source: *Errata Memorandum for the Supplement to the Natural Environment Study* (November 2012).

[1] Excludes impacts to jurisdictional areas that are within the MCP/SR-79 interchange footprint, which are wholly attributable to the SR-79 Realignment Project (i.e., jurisdictional areas that will be impacted by the SR-79 Realignment project prior to construction of the MCP project and will be mitigated by the SR-79 Realignment project).

CDFW = California Department of Fish and Wildlife
MCP = Mid County Parkway
SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation
SR-79 = State Route 79
USACE = United States Army Corps of Engineers

Additionally, there is 0.35 acre of isolated wetlands that the RWQCB would also regulate under the California Porter-Cologne Water Quality Control Act that is within the Alternative 4 Modified Build Alternative and both Alternative 4 Modified design variations. This isolated water body is located north of Ramona Expressway, between Indian Avenue and an agricultural field, without an outlet and no connection to any jurisdictional areas (as shown at CM31 on Figure 4.19 of the 2008 *Jurisdictional Delineation and Assessment Report*, in Appendix L of the 2008 NES).

As shown in Table 3.18.B, the impacts to USACE jurisdictional areas under the base case designs are similar for each MCP Build Alternative, ranging from 7.15 acres for Alternative 9 Modified and Alternative 9 Modified SJRB DV to 7.28 acres for Alternative 5 Modified. When the design variations are considered, the Alternative 9 Modified San Jacinto North Design Variation (SJN DV) would result in the fewest permanent impacts to both CDFW jurisdictional riparian habitat and streambeds and USACE jurisdictional wetlands and nonwetlands waters of the United States.

As shown in Table 3.18.B, Alternative 5 Modified and Alternative 5 Modified San Jacinto River Bridge Design Variation (SJRB DV) would have the greatest permanent impacts to CDFW jurisdictional riparian habitat and streambeds, USACE jurisdictional wetlands, and USACE nonwetland waters of the United States Table 3.18.C, provides a further breakdown of type and condition of permanent impacts to USACE jurisdictional wetlands and nonwetland waters of the United States. The information in Table 3.18.B was presented in the 2013 Recirculated Draft EIR/Supplemental Draft EIS prior to the completion of the revised *Jurisdictional Delineation and Assessment Report* (December 2013).

Least Environmentally Damaging Practicable Alternative

Pursuant to Checkpoint 3 in the 2006 National Environmental Policy Act/Clean Water Act (NEPA/404) Section 404 Memorandum of Understanding (MOU), the FHWA formally consulted with the USFWS, the USACE, and the EPA on the Least Environmentally Damaging Practicable Alternative (LEDPA) for the MCP project. The LEDPA analyses are documented in detail in the "Preferred Alternative/ Preliminary LEDPA Identification (NEPA/404 Checkpoint 3)" technical memorandum (December 18, 2013), which is provided in Appendix J, Supplemental Chapter 5 Attachments (in Attachment J-7, NEPA/404 MOU Checkpoint 3 Correspondence), and are summarized in this section. The agency consultation supporting the LEDPA analyses and determination process is described in Chapter 5, Comments and Coordination, in this Final EIR/EIS.

Because there are several alignment alternatives, with potential Design Variations for each, the LEDPA analysis was separated in two parts: (1) selection of a preliminary LEDPA alignment; and (2) selection of Design Variations for the preliminary LEDPA alignment. The MCP alternatives were evaluated using the criteria agreed upon by the transportation and resource agencies for use in identifying the Preliminary LEDPA. The criteria includes three broad categories with specific criteria for each category: Purpose and Need, Reasonable and Practicable, and Environmental Impacts. Using data from the MCP technical studies and the Recirculated Draft EIR/ Supplemental Draft EIS, Tables 3.18.D and 13.18.E were developed to present information to allow for comparison of the alternatives based on these selection criteria.

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Table 3.18.C Permanent Impacts to USACE Jurisdictional Wetlands and Nonwetland Waters by Drainage System

Reach	Drainage System Identifier	Condition[1]	Alternative 4 Modified (Permanent Impacts, Acres)						Alternative 5 Modified (Permanent Impacts, Acres)						Alternative 9 Modified (Permanent Impacts, Acres)					
			Base Case Design (SJS)		SJN DV		SJRB DV		Base Case Design (SJS)		SJN DV		SJRB DV		Base Case Design (SJS)		SJN DV		SJRB DV (Preferred Alternative)	
			USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands
5																				
5	Miscellaneous	Low	0.05	—	0.05	—	0.05	—	0.05	—	0.05	—	0.05	—	0.05	—	0.05	—	0.05	—
5 Total			**0.05**		**0.05**	**—**	**0.05**	**—**	**0.05**	**—**	**0.05**	**—**	**0.05**	**—**	**0.05**	**—**	**0.05**	**—**	**0.05**	**—**
6																				
6	57	Low	0.00	—	0.00	—	0.00	—	0.00	—	0.00	—	0.00	—	0.00	—	0.00	—	0.00	—
6	58	Low	—	0.02	—	0.02	—	0.02	—	0.02	—	0.02	—	0.02	—	0.01	—	0.01	—	0.01
6	59	Low	0.28	—	0.28	—	0.28	—	0.06	—	0.06	—	0.06	—	0.04	—	0.04	—	0.04	—
6	60	Low	0.15	0.09	0.15	0.09	0.15	0.09	0.06	0.02	0.06	0.02	0.06	0.02	0.08	0.07	0.08	0.07	0.08	0.07
6	Miscellaneous	Low	1.46	—	1.45	—	1.46	—	1.94	—	1.94	—	1.94	—	1.79	—	1.79	—	1.79	—
6 Total			**1.89**	**0.11**	**1.88**	**0.11**	**1.89**	**0.11**	**2.06**	**0.04**	**2.06**	**0.04**	**2.06**	**0.04**	**1.91**	**0.08**	**1.91**	**0.08**	**1.91**	**0.08**
7																				
7	61	Low	0.07	—	0.07	—	0.07	—	0.07	—	0.07	—	0.07	—	0.07	0.00	0.07	0.00	0.07	0.00
7	63	Medium	—	0.27	—	0.27	—	0.27	—	0.27	—	0.27	—	0.27	—	0.27	—	0.27	—	0.27
7	Miscellaneous	Low	1.13	—	1.13	—	1.13	—	1.13	—	1.13	—	1.13	—	1.13	—	1.13	—	1.13	—
7 Total			**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**	**1.20**	**0.27**
8																				
8	64	Low	0.16	0.14	—	0.02	0.16	0.14	0.16	0.14	—	0.02	0.16	0.14	0.16	0.14	—	0.02	0.16	0.14
8	65	Low	0.13	0.26	0.03	0.11	0.13	0.26	0.13	0.26	0.03	0.11	0.13	0.26	0.13	0.26	0.03	0.11	0.13	0.26
8	66	Medium	0.01	1.40	0.02	1.53	0.01	1.40	0.01	1.40	0.02	1.53	0.01	1.40	0.01	1.40	0.02	1.53	0.01	1.40
8	67	Medium	0.98	—	0.98	—	0.98	—	0.98	—	0.98	—	0.98	—	0.98	—	0.98	—	0.98	—
8	Miscellaneous	Low	0.59	—	0.39	—	0.59	—	0.59	—	0.39	—	0.59	—	0.59	—	0.39	—	0.59	—
8 Total			**1.87**	**1.80**	**1.42**	**1.66**	**1.87**	**1.80**	**1.87**	**1.80**	**1.42**	**1.66**	**1.87**	**1.80**	**1.87**	**1.80**	**1.42**	**1.66**	**1.87**	**1.80**
Total			**5.01**	**2.18**	**4.55**	**2.04**	**5.01**	**2.18**	**5.18**	**2.11**	**4.73**	**1.97**	**5.18**	**2.11**	**5.03**	**2.15**	**4.58**	**2.01**	**5.03**	**2.15**

Source: *Draft 404(B)(1) Alternatives Analysis, Mid County Parkway* (November 2012) (provided in Appendix M in the Recirculated Draft EIR/Supplemental Draft EIS .

[1] Condition of drainage system is based on ranking of Habitat Integrity Index as identified by Robert Smith in *Assessment of Riparian Ecosystem Integrity: San Jacinto River Watershed, Riverside County, California,* 2002. The habitat integrity of the drainage systems identified by Smith were used as a reference for other drainage systems in the study area. For purposes of this analysis, low habitat integrity is based on Smith's integrity index <0.4; medium habitat integrity is 0.4-0.7; and high habitat integrity would be >0.7.

SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation
SJS = San Jacinto South
USACE = United States Army Corps of Engineers

Table3.18. D: Detail Matrix of the Evaluation of the Mid County Parkway Build Alternatives

Criteria	Values (Metrics)	Alternative 4 Modified Base Case Design	Alternative 5 Modified Base Case Design	Alternative 9 Modified Base Case Design
I. PURPOSE AND NEED				
1. Provide capacity for 2040[a]	Y/N	Yes	Yes	Yes
2. Serve regional movement of people and goods[b]	Y/N	Yes	Yes	Yes
3. Provide roadway geometrics to meet State Highway design standards[c]	Y/N	Yes	Yes	Yes
4. Provide limited access facility[d]	Number of Access Points	8	8	8
5. Accommodate STAA trucks[e]	Y/N	Yes	Yes	Yes
6. Provide a facility that is compatible with a future multimodal transportation system[f]	Y/N	Yes	Yes	Yes
7. Provide an effective and efficient connection between and through San Jacinto and Perris[g]	Y/N	Yes	Yes	Yes
II. REASONABLE AND PRACTICABLE				
1. COST[h]				
1.1 Construction[1]	U.S. Dollars	$1.79 Billion	$1.40 Billion	$ 1.31 Billion
1.2 ROW Acquisition	U.S. Dollars	$0.20 Billion	$0.21 Billion	$0.19 Billion
1.3 Mitigation[2]	U.S. Dollars	$0.11 Billion	$0.11 Billion	$0.11 Billion
1.4 Total (Construction, ROW, Mitigation)	U.S. Dollars	$2.10 Billion	$1.72 Billion	$1.61 Billion
1.5 Engineering/Design	U.S. Dollars	$0.42 Billion	$0.34 Billion	$0.32 Billion
2. TECHNOLOGICAL CONSTRAINTS				
2.1 Safety (Non-Highway)	Y/N	No	No	No
2.2 Engineering Issues	Y/N	No	No	No
3. LOGISTICAL CONSTRAINTS				
3.1 Logistical Constraints	Y/N	No	No	No
4. OTHER NEPA/404 CRITERIA				
4.1 Unacceptable Adverse Social, Economic, or Environmental Impacts(i)	Y/N	No	No	No
4.2 Serious Community Disruption(j)	Y/N	No	No	No
III. ENVIRONMENTAL				
1. WATER RESOURCES/AQUATIC ECOSYSTEM				
1.1 USACE Jurisdictional Waters/Wetlands (Impacts to Waters of the U.S.)(k)	Acreage	• 5.34 acres of permanent impacts (1.01 acre of wetlands; 4.33 acres of non-wetland waters) • 7.72 acres of temporary impacts (4.94 acres of wetlands; 2.78 acres of non-wetland waters)	• 5.15 acres of permanent impacts (0.61 acre of wetlands; 4.54 acres of non-wetland waters) • 6.15 acres of temporary impacts (4.26 acres of wetlands; 1.89 acres of non-wetland waters)	• 5.01 acres of permanent impacts (0.64 acre of wetlands; 4.37 acres of non-wetland waters) • 6.91 acres of temporary impacts (4.79 acres of wetlands; 2.12 acres of non-wetland waters)
1.1A California Department of Fish and Wildlife Jurisdictional Area(l)	Acreage	• 8.34 acres of permanent impacts • 4.49 acres of temporary impacts	• 7.31 acres of permanent impacts • 3.95 acres of temporary impacts	• 7.50 total acres of permanent impacts • 4.30 total acres of temporary impacts
1.2 Functions/Values Affected (Hydrology Impacts)(m)	Sum of normalized rank scores for all criteria for alternatives corridor alignments from ERDC Conditions Assessment	12.1	8.9	9.2

Table3.18. D: Detail Matrix of the Evaluation of the Mid County Parkway Build Alternatives

Criteria	Values (Metrics)	Alternative 4 Modified Base Case Design	Alternative 5 Modified Base Case Design	Alternative 9 Modified Base Case Design
	(lower number = fewer impacts)			
1.3 Consistent with SAMP Goals(n)	N/A	N/A	N/A	N/A
1.4 Floodplain Impacts(o)	Floodplain Affected: Transverse Encroachment (TE) Longitudinal Encroachment (LE)	• Perris Valley Storm Drain: LE	• Perris Valley Storm Drain: TE	• Perris Valley Storm Drain: TE
		• San Jacinto River at Lakeview: TE	• San Jacinto River at Lakeview: TE	• San Jacinto River at Lakeview: TE
		• San Jacinto River at SR-79: LE	• San Jacinto River at SR-79: LE	• San Jacinto River at SR-79: LE
1.5 Beneficial Uses Affected(p)	Beneficial Use	With implementation of BMPs, there will be no adverse effects to Beneficial Uses.	With implementation of BMPs, there will be no adverse effects to Beneficial Uses.	With implementation of BMPs, there will be no adverse effects to Beneficial Uses.
1.6 Water Quality Construction Impacts(q)	No. of Stream Crossings; Acres of soil disturbance	• 13 stream crossings	• 11 stream crossings	• 11 stream crossings
		• 1,153 acres of maximum disturbed soil	• 1,145 acres of maximum disturbed soil	• 1,091 acres of maximum disturbed soil
1.7 Water Quality Permanent Impacts(r)	Acres of new pavement; Acres of steep slopes; Increase/Decrease in pollutant loads	• 525 acres of new pavement	• 516.9 acres of new pavement	• 479.5 acres of new pavement
		• 6 acres of steep slopes	• 6 acres of steep slopes	• 6 acres of steep slopes
		• Decrease annual loading with implemented BMPs	• Decrease annual loading with implemented BMPs	• Decrease annual loading with implemented BMPs
2. THREATENED AND ENDANGERED SPECIES[s]				
2.1 Species/Populations Affected (Wildlife)	Acreage	• 3.7 acres of least Bell's vireo occupied habitat	• 3.7 acres of least Bell's vireo habitat	• 3.7 acres of least Bell's vireo habitat
		• 1.7 acres of occupied SBKR habitat	• 1.7 acres of occupied SBKR habitat	• 1.7 acres of occupied SBKR habitat
		• 1.5 acres of final SBKR critical habitat (2002)	• 1.5 acres of reinstated SBKR critical habitat (2002)	• 1.5 acres of reinstated SBKR critical habitat (2002)
2.2 Species/Populations Affected (Plants)	Acreage (temporary and permanent impacts)	• 0.36 acre of occupied San Jacinto valley crownscale habitat	• 0.36 acre of occupied San Jacinto valley crownscale habitat	• 0.36 acre of occupied San Jacinto valley crownscale habitat
		• 1.09 acres of occupied spreading navarretia habitat and final critical habitat (2008) with primary constituent elements	• 1.09 acres of occupied spreading navarretia habitat and final critical habitat (2008) with primary constituent elements	• 1.09 acres of occupied spreading navarretia habitat and final critical habitat (2008) with primary constituent elements
3. PLANT COMMUNITIES[t]				
3.1 Sensitive Plant Communities Affected	Acreage (temporary and permanent impacts)	• 92.5 acres of Riversidean upland sage scrub	• 89.4 acres of Riversidean upland sage scrub	• 87.0 acres of Riversidean upland sage scrub
		• 27.8 total acres of San Jacinto River alkali communities (20.6 acres permanent, 7.2 acres temporary)	• 27.8 total acres of San Jacinto River alkali communities (20.6 acres permanent, 7.2 acres temporary)	• 27.8 total acres of San Jacinto River alkali communities (20.6 acres permanent, 7.2 acres temporary)
		• 5.4 total acres of riparian habitat (2.7 acres permanent, 2.7 acres temporary)	• 5.3 acres of riparian habitat (2.6 acres permanent, 2.7 acres temporary)	• 5.4 acres of riparian habitat (2.7 acres permanent, 2.7 acres temporary)
4. EFFECTS ON EXISTING HCPS				
4.1 SKR HCP Reserves[u]	Require Acquisition of Reserve Land (Y/N)	No	No	No
5. WESTERN RIVERSIDE COUNTY MSHCP				
5.1 MSHCP Consistency Determination	Consistency Determination Required (Y/N)	Yes	Yes	Yes

Table3.18. D: Detail Matrix of the Evaluation of the Mid County Parkway Build Alternatives

Criteria	Values (Metrics)	Alternative 4 Modified Base Case Design	Alternative 5 Modified Base Case Design	Alternative 9 Modified Base Case Design
5.2 Conservation Goals(v)	Acreage Affected of MSHCP Criteria Area, Public/Quasi-Public Lands, and MSHCP Conservation Area (Cores/Linkages) (temporary and permanent impacts)	• 192 acres affected of Criteria Area	• 192 acres affected of Criteria Area	• 192 acres affected of Criteria Area
		• 7.3 acres of temporary effects to PQP lands	• 4.3 acres of temporary effects to PQP lands	• 3.8 acres of temporary effects to PQP lands
		• 62–68 acres affected of Conservation Area	• 62–68 acres affected of Conservation Area	• 62–68 acres affected of Conservation Area
5.3 Mitigation Acreage Required	Acreage	N/A	N/A	N/A
5.4 Mitigation Acreage Available	Y/N	N/A	N/A	N/A
6. SECTION4(f) RESOURCES(w)				
6.1 Section 4(f) Resources - direct use[3]	Total Section 4(f) Resources, Acreage, and Cultural Sites	• 5.18 acres of P-33-16598 (CA RIV 8712) Multiuse Prehistoric Site and avoidance of P-33-3653 with an ESA.	• 5.18 acres of P-33-16598 (CA RIV 8712) Multiuse Prehistoric Site and avoidance of P-33-3653 with an ESA.	• 5.18 acres of P-33-16598 (CA RIV 8712) Multiuse Prehistoric Site and avoidance of P-33-3653 with an ESA.
		• Four archaeological sites assumed to be eligible for the National Register.	• Four archaeological sites assumed to be eligible for the National Register.	• Four archaeological sites assumed to be eligible for the National Register.
6.2 Section 4(f) Resources - constructive use	Number of Section 4(f) Resources	None	None	None
7. SECTION 6(f) LANDS				
7.1 Section 6(f) Lands Affected	Acreage	None	None	None
8. CULTURAL RESOURCES(x)				
8.1 Prehistoric archaeological resources	Number of Sites	5 sites	5 sites	5 sites
8.2 Historic archaeological/architectural resources	Number of Sites	0 sites	0 sites	0 sites
8.3 Sacred Sites	Number of Sites	1 site	1 site	1 site
9. LAND USE IMPACTS				
9.1a Access Impacts (Business)(y)	Ranking 1-3 (1 Least Impact, 3 Worst Impact)	1	3	2
9.1b Access Impacts (Residential)(y)	Ranking 1-3 (1 Least Impact, 3 Worst Impact)	1	2	3
9.2a Cities of San Jacinto and Perris(z)	Inconsistencies	• Inconsistent with designated roadways and land uses for the City of Perris General Plan because it does not follow the original CETAP alignment.	• Inconsistent with designated roadways and land uses for the City of Perris General Plan because it does not follow the original CETAP alignment.	• Inconsistent with designated roadways and land uses for the City of Perris General Plan because it does not follow the original CETAP alignment.
		• Amendments to the San Jacinto General Plan required to reflect either SJN or SJS DV alignment at east end of MCP.	• Amendments to the San Jacinto General Plan required to reflect either SJN or SJS DV alignment at east end of MCP.	• Amendments to the San Jacinto General Plan required to reflect either SJN or SJS DV alignment at east end of MCP.
9.2b County of Riverside(aa)	Inconsistencies	• Inconsistent with Land Use Policies LU 16.2 and 16.4, which protect agricultural lands.	• Inconsistent with Land Use Policies LU 16.2 and 16.4, which protect agricultural lands.	• Inconsistent with Land Use Policies LU 16.2 and 16.4, which protect agricultural lands.
9.3 Farmland Impacts(bb)	Acreage	Prime Farmland 212.7 acres, Farmland of State Importance 164.7 acres, Unique Farmland 47.5 acres, Farmland of Local Importance 601.0 acres, and Grazing Land 81.45 acres. **(Total: 1,107.3 acres)**	Prime Farmland 250.8 acres, Farmland of State Importance 149.9 acres, Unique Farmland 47.5 acres, Farmland of Local Importance 538.0 acres, and Grazing Land 75.72 acres. **(Total: 1,061.9 acres)**	Prime Farmland 191.0 acres, Farmland of State Importance 149.9 acres, Unique Farmland 47.5 acres, Farmland of Local Importance 578.6 acres, and Grazing Land 74.87 acres. **(Total: 1,041.8 acres)**

Table3.18. D: Detail Matrix of the Evaluation of the Mid County Parkway Build Alternatives

Criteria	Values (Metrics)	Alternative 4 Modified Base Case Design	Alternative 5 Modified Base Case Design	Alternative 9 Modified Base Case Design
10. SOCIOECONOMIC/COMMUNITY IMPACTS				
10.1 Business Displacements[(cc)]	Property acquisitions & employees displaced	• 91 non-residential property acquisitions	• 159 non-residential property acquisitions	• 103 non-residential property acquisitions
		• 68 businesses displaced	• 90 businesses displaced	• 37 businesses displaced
		• 350 employees potentially displaced	• 1,129 employees potentially displaced	• 188 employees potentially displaced
10.2 Residential Displacements[(dd)]	Property acquisitions & occupants displaced	• 48 residential property acquisitions	• 36 residential property acquisitions	• 102 residential property acquisitions
		• 426 occupants displaced	• 373 occupants displaced	• 659 occupants displaced
10.3 Travel Pattern Disruptions[(ee)]	Ranking 1-3 (1 Least Impact, 3 Worst Impacts)	1	3	2
10.4 Environmental Justice Concerns[(ff)]	Impacts to minority/low-income populations	• Does not result in disproportionate impacts to environmental justice populations	• Does result in disproportionate impacts to environmental justice populations	• Does not result in disproportionate impacts to environmental justice populations
10.5 Community Service Disruptions (EMS, fire, police)[(gg)]	Property acquisitions Y/N	No	No	No
10.6 Neighborhood/Community Impacts[(hh)]	Y/N	Yes	Yes	Yes
10.7 Schools[(ii)]	Direct Impacts	• Direct impacts to the portable classrooms at Val Verde High School and the Val Verde Unified School District Administrative and Facilities Operation Building (City of Perris).	• Direct impacts to the portable classrooms at Val Verde High School and the Val Verde Unified School District Administrative and Facilities Operation Building (City of Perris).	• No direct impact to schools.
10.8 Support by local jurisdictions, community groups, and public	Support/Opposition	• City of San Jacinto opposes the SJN DV • Riverside County prefers the SJRB DV over the Base Case	• City of San Jacinto opposes the SJN DV • Riverside County prefers the SJRB DV over the Base Case	• City of Perris identified Alternative 9 as its locally preferred alternative • City of San Jacinto opposes the SJN DV • Riverside County prefers the SJRB DV over the Base Case
11. AIR QUALITY IMPACTS[(jj)]				
11.1 Criteria Pollutant Emissions in the MCP Region	Emissions in lbs/day	• 201,720 lbs/day of CO	• 201,720 lbs/day of CO	• 201,914 lbs/day of CO
		• 11,057 lbs/day of ROG	• 11,056 lbs/day of ROG	• 11,066 lbs/day of ROG
		• 52,327 lbs/day of NO_X	• 52,323 lbs/day of NO_X	• 52,365 lbs/day of NO_X
		• 1,200 ton/day of SO_X	• 1,200 ton/day of SO_X	• 1,201 ton/day of SO_X
		• 11,623 lbs/day of PM_{10}	• 11,623 lbs/day of PM_{10}	• 11,633 lbs/day of PM_{10}
		• 7,301 lbs/day of $PM_{2.5}$	• 7,300 lbs/day of $PM_{2.5}$	• 7,306 lbs/day of $PM_{2.5}$
		• 126,057,775 lbs/day of CO_2	• 126,043,848 lbs/day of CO_2	• 126,150,645 lbs/day of CO_2
11.2 Exceeds NAAQS Emission Standards	Y/N	No	No	No
12. NOISE IMPACTS				
12.1 Sensitive Receptors Affected[(kk)]	Number of Modeled Receptors Affected	• Of the 337 modeled receptors, 73 receptors approach or exceed the 67 dBA L_{eq} NAC and 133 receptors would experience a substantial increase in noise of 12 dB or more.	• Of the 358 modeled receptors, 69 receptors approach or exceed the 67 dBA L_{eq} NAC and 151 receptors would experience a substantial increase in noise of 12 dB or more.	• Of the 355 modeled receptors, 66 receptors approach or exceed the 67 dBA L_{eq} NAC and 150 receptors would experience a substantial increase in noise of 12 dB or more.

Table3.18. D: Detail Matrix of the Evaluation of the Mid County Parkway Build Alternatives

Criteria	Values (Metrics)	Alternative 4 Modified Base Case Design	Alternative 5 Modified Base Case Design	Alternative 9 Modified Base Case Design
12.2 Amount of Mitigation Feasible[II]	Number and Length of Sound Barriers	• 4 sound barriers	• 6 sound barriers	• 6 sound barriers
		• 19,872 linear feet	• 18,160 linear feet	• 21,095 linear feet

[1] Construction cost does not include mitigation costs for each alternative.
[2] Environmental Mitigation Costs include the costs to purchase acreage for mitigation, wildlife undercrossing, and the San Jacinto River Bridge in the Lakeview area.
[3] After the NEPA/404 Checkpoint 3 process, the alignment of the Build Alternatives was refined to avoid the use of any land in the San Jacinto Wildlife Area.

(a) Figures 7-16 (Alternative 4 Modified), 7-30 (Alternative 5 Modified), and 7-44 (Alternative 9 Modified) in the *Mid County Parkway Traffic Technical Report* (February 3, 2012)
(b) Subsection titled "Population/Traffic Forecast" (page 1-17) in the Recirculated Draft EIR/Supplemental Draft EIS
(c) Subsections titled "Capacity Needs" (page 1-18), "Safety" (page 1-22), and "Operational" (page 1-26), in the Recirculated Draft EIR/Supplemental Draft EIS
(d) Section 2.3.2.1, Design (page 2-18), in the Recirculated Draft EIR/Supplemental Draft EIS
(e) Section 2.3.2.1, Design (page 2-18), in the Recirculated Draft EIR/Supplemental Draft EIS
(f) Section 2.3.2.2, Typical Sections (page 2-19), in the Recirculated Draft EIR/Supplemental Draft EIS
(g) Section 2.3, Project Alternatives (page 2-7), in the Recirculated Draft EIR/Supplemental Draft EIS
(h) Updated cost estimates (Jacobs, 2013) to be included in Final Project Report and Final EIR/EIS
(i) Refer to the environmental analyses in Chapter 3.0, Affected Environment, Environmental Consequences, and Avoidance, Minimization, and Mitigation Measures, in the Recirculated Draft EIR/Supplemental Draft EIS
(j) Refer to Section 3.4, Community Impacts, in the Recirculated Draft EIR/Supplemental Draft EIS
(k) Updated calculations of impacts based on updated draft jurisdictional delineation (LSA 2013). Updated calculations to be included in Final EIR/EIS.
(l) Updated calculations of impacts based on updated draft jurisdictional delineation (LSA 2013). Updated calculations to be included in Final EIR/EIS.
(m) Riparian Ecosystem Integrity Assessment (provided as Appendix G in the *Supplement to the Natural Environment Study for the Mid County Parkway Project*, December 2011)
(n) SAMP is no longer active per USACE/Los Angeles District website (http://www.spl.usace.army.mil/Missions/Regulatory/ProjectsPrograms.aspx, accessed December 4, 2013)
(o) Subsection titled "Floodplain Encroachment" (page 3.9-10), in the Recirculated Draft EIR/Supplemental Draft EIS
(p) Section 3.10.3.2, Temporary Impacts (page 3.10-35), in Section 3.10, Water Quality and Storm Water Runoff, in the Recirculated Draft EIR/Supplemental Draft EIS
(q) Section 3.10.3.2, Temporary Impacts (page 3.10-35), in Section 3.10, Water Quality and Storm Water Runoff, in the Recirculated Draft EIR/Supplemental Draft EIS
(r) Page 3.10- 28 in Section 3.10.3.1, Permanent Impacts (page 3.10-17), in Section 3.10, Water Quality and Storm Water Runoff, in the Recirculated Draft EIR/Supplemental Draft EIS
(s) Table 3.21.B, Impacts to Threatened and Endangered Species (page 3.21-7) in Section 3.21, Threatened and Endangered Species, in the Recirculated Draft EIR/Supplemental Draft EIS
(t) Updated calculations based on revised design and will be included in Final EIR/EIS
(u) Subsection titled "Habitat Conservation Plan for the Stephens' Kangaroo Rat" (page 3.17-47) in Section 3.17, Natural Communities, in the Recirculated Draft EIR/Supplemental Draft EIS
(v) Draft MSHCP Consistency Analysis and DBESP (September 2013)
(w) Sections 4.0, Multiuse Prehistoric Site (page 4-1); 5.0, Sites P-33-19862, P-33-19863, P-33-19864, and P-33-19866 (page 5-1), and 7.0, Use of Nationwide Programmatic Section 4(f) Evaluation for the San Jacinto Wildlife Area (page 7-1) in Appendix B, Revised Draft Section 4(f) Evaluation, in the Recirculated Draft EIR/Supplemental EIS
(x) Section 3.8.3.1, Permanent Impacts (page 3.8-14), in Section 3.8, Cultural Resources, in the Recirculated Draft EIR/Supplemental Draft EIS
(y) Access assessment based on Appendix I, Supplemental Chapter 2 Attachments, Attachment G, Local Circulation Modifications, in the Recirculated Draft EIR/Supplemental Draft EIS
(z) Subsection titled "City and County General Plans" (page 3.1-32), in Section 3.1, Land Use, in the Recirculated Draft EIR/Supplemental Draft EIS
(aa) Table 3.3.C, Impacts to Farmland per Alternative (acres) (page 3.3-9), in Section 3.3, Farmlands/Timberlands, in the Recirculated Draft EIR/Supplemental Draft EIS
(bb) Tables 3.4.F, Full Parcel Acquisitions and Displacements by Alternative (page 3.4-34), and 3.4.G, Number of Displaced Employees by Alternative and Jurisdiction (page 3.4-36), in Section 3.4, Community Impacts, in the Recirculated Draft EIR/Supplemental Draft EIS
(cc) Subsections titled "Temporary Impacts" (page 3.4-29), and "Permanent Impacts" (page 3.4-50), in Section 3.4, Community Impacts, in the Recirculated Draft EIR/Supplemental Draft EIS
(dd) Section 3.4.3, Environmental Justice (page 3.4-41), in Section 3.4, Community Impacts, in the Recirculated Draft EIR/Supplemental Draft EIS
(ee) Section 3.5.2, Environmental Consequences (page 3.5-3), in Section 3.5, Utilities/Emergency Services, in the Recirculated Draft EIR/Supplemental Draft EIS
(ff) Travel pattern disruptions based on changes to access described in Appendix I, Supplemental Chapter 2 Attachments, Attachment G, Local Circulation Modifications, in the Recirculated Draft EIR/Supplemental Draft EIS
(gg) Subsections titled "Perris Area (Mead Valley)/City of Perris" (pages 3.4-24, 3.4-27, and 3.4-29, respectively, for Alternatives 4, 5, and 9 Modified), in Section 3.4, Community Impacts, in the Recirculated Draft EIR/Supplemental Draft EIS
(hh) Tables 3.14.I, Daily PM2.5 Emissions (lbs/day) (page 3.14-22); 3.14.J, Daily PM10 Emissions (lbs/day) (page 3.14-22); 3.14.S, MSAT Emissions for the MCP Study Area (lbs/day) (page 3.14-34); 3.14.T, 2008 Regional Vehicle Emissions (lbs/day) (page 3.14-36); 3.14.U, 2020 Regional Vehicle Emissions (lbs/day) (page 3.14-37); 3.14.V, 2040 Regional Vehicle Emissions (lbs/day); and 3.14.W Maximum Project Construction Emissions (lbs/day) (page 3.14-42)
(ii) Section 3.15.3.1, Permanent Impacts (page 3.15-67), and Tables 3.15.Q through 3.15.X (starting on page 3.15-37), in Section 3.15, Noise, in the Recirculated Draft EIR/Supplemental Draft EIS
(jj) Subsection titled "Noise Abatement Consideration" (page 3.15-70), and Table 3.15.AB, Summary of Preliminary Recommended Noise Barriers, (page 3.15-96), in Section 3.15, Noise, in the Recirculated Draft EIR/Supplemental Draft EIS

Table3.18. D: Detail Matrix of the Evaluation of the Mid County Parkway Build Alternatives

Criteria	Values (Metrics)	Alternative 4 Modified Base Case Design	Alternative 5 Modified Base Case Design	Alternative 9 Modified Base Case Design

BMP = best management practice
CETAP = Community and Environmental Transportation Acceptability Process
CO = carbon monoxide
CO_2 = carbon dioxide
dB = decibels
dBA = A-weighted decibels
EIR = Environmental Impact Report
EIS = Environmental Impact Statement
EMS = Emergency Medical Services
ERDC = Engineer and Research Development Center
ESA = Environmentally Sensitive Area
HCP = Habitat Conservation Plan
lbs/day = pounds per day
L_{eq} = equivalent continuous sound level
MCP = Mid County Parkway
MSHCP = Multiple Species Habitat Conservation Plan
N/A = Not Applicable
NAAQS = National Ambient Air Quality Standards
NAC = Noise Abatement Criteria
National Register = National Register of Historic Places
NEPA = National Environmental Policy Act
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PQP = Public/Quasi-Public
RDEIR = Recirculated Draft Environmental Impact Report
RDEIS = Recirculated Draft Environmental Impact Statement
ROG = reactive organic gases
ROW = right of way
SAMP = Special Area Management Plan
SBKR = San Bernardino kangaroo rat
SJN = San Jacinto North
SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation
SJS = San Jacinto South
SKR = Stephens' kangaroo rat
SO_X = oxides of sulfur
SR-79 = State Route 79
STAA = Surface Transportation Assistance Act
USACE = United States Army Corps of Engineers
Y/N = yes/no

Table 3.18.E: Detail Matrix of the Evaluation of Alternative 9 Modified Design Variations

Criteria	Values (Metrics)	Alternative 9 Modified		
		Base Case Design	SJN DV	SJRB DV
I. PURPOSE AND NEED				
1. Provide capacity for 2040	Y/N	Yes	Yes	Yes
2. Serve regional movement of people and goods	Y/N	Yes	Yes	Yes
3. Provide roadway geometrics to meet State Highway design standards	Y/N	Yes	Yes	Yes
4. Provide limited access facility	Number of Access Points	8	8	8
5. Accommodate STAA trucks	Y/N	Yes	Yes	Yes
6. Provide a facility that is compatible with a future multimodal transportation system	Y/N	Yes	Yes	Yes
7. Provide an effective and efficient connection between and through San Jacinto and Perris	Y/N	Yes	Yes	Yes
II. REASONABLE AND PRACTICABLE				
1. COST				
1.1 Construction[1]	U.S. Dollars	$ 1.31 Billion	$1.27 Billion	$1.31 Billion
1.2 ROW Acquisition	U.S. Dollars	$0.19 Billion	$0.15 Billion	$0.19 Billion
1.3 Mitigation[2]	U.S. Dollars	$0.11 Billion	$0.11 Billion	$0.08 Billion
1.4 Total (Construction, ROW, Mitigation)	U.S. Dollars	$1.61 Billion	$1.53 Billion	$1.58 Billion
1.5 Engineering/Design	U.S. Dollars	$0.32 Billion	$0.31 Billion	$0.32 Billion
2.1 Safety (Non-Highway)	Y/N	No	No	No
2.2 Engineering Issues	Y/N	No	No; but the interchange spacing does not meet Caltrans' standard	No
3. LOGISTICAL CONSTRAINTS				
3.1 Logistical Constraints	Y/N	No	No	No
4. OTHER NEPA/404 CRITERIA				
4.1 Unacceptable Adverse Social, Economic, or Environmental Impacts	Y/N	No	No	No
4.2 Serious Community Disruption	Y/N	No	No	No
III. ENVIRONMENTAL				
1. WATER RESOURCES/AQUATIC ECOSYSTEM				
1.1 USACE Jurisdictional Waters/Wetlands (Impacts to Waters of the U.S.)	Acreage	• 5.01 acres of permanent impacts (0.64 acres of wetlands; 4.37 acres of non-wetland waters)	• 4.25 acres of permanent impacts (0.38 acre of wetlands; 3.87 acres of non-wetland waters)	• 5.01 acres of permanent impacts (0.64 acres of wetlands; 4.37 acres of non-wetland waters)
		• 6.91 acres of temporary impacts (4.79 acres of wetlands; 2.12 acres of non-wetland waters)	• 5.06 acres of temporary impacts (3.08 acres of wetlands; 1.98 acres of non-wetland waters)	• 6.91 acres of temporary impacts (4.79 acres of wetlands; 2.12 acres of non-wetland waters)
1.1A California Department of Fish and Wildlife Jurisdictional Area	Acreage	• 7.50 total acres of permanent impacts	• 7.87 total acres of permanent impacts	• 7.50 total acres of permanent impacts
		• 4.30 total acres of temporary impacts	• 2.24 total acres of temporary impacts	• 4.30 total acres of temporary impacts

Table 3.18.E: Detail Matrix of the Evaluation of Alternative 9 Modified Design Variations

Criteria	Values (Metrics)	Alternative 9 Modified		
		Base Case Design	SJN DV	SJRB DV
1.2 Functions/Values Affected (Hydrology Impacts)	Sum of normalized rank scores for all criteria for alternatives corridor alignments from ERDC Riparian Ecosystem Integrity Assessment (lower number = fewer impacts)	9.2	9	10.8
1.3 Consistent with SAMP Goals	Not applicable	Not applicable	Not applicable	Not applicable
1.4 Floodplain Impacts	Floodplain Affected:	• Perris Valley Storm Drain: TE	• Perris Valley Storm Drain: TE	• Perris Valley Storm Drain: TE
	Transverse Encroachment (TE)	• San Jacinto River at Lakeview: TE	• San Jacinto River at Lakeview: TE	• San Jacinto River at Lakeview: TE
	Longitudinal Encroachment (LE)	• San Jacinto River at SR-79: LE	• San Jacinto River at SR-79: LE	• San Jacinto River at SR-79: LE
1.5 Beneficial Uses Affected	Beneficial Use	With implementation of BMPs, there will be no adverse effects to Beneficial Uses.	With implementation of BMPs, there will be no adverse effects to Beneficial Uses.	With implementation of BMPs, there will be no adverse effects to Beneficial Uses.
1.6 Water Quality Construction Impacts	No. of Stream Crossings; Acres of soil disturbance	• 11 stream crossings	• 10 stream crossings	• 11 stream crossings
		• 1,091 acres of maximum disturbed soil	• 1,078 acres of maximum disturbed soil	• 1,091 acres of maximum disturbed soil
1.7 Water Quality Permanent Impacts	Acres of new pavement; Acres of steep slopes; Increase/Decrease in pollutant loads	• 479.5 acres of new pavement	• 460.3 acres of new pavement	• 479.5 acres of new pavement
		• 6 acres of steep slopes	• 6 acres of steep slopes	• 6 acres of steep slopes
		• Decrease annual loading with implemented BMPs	• Decrease annual loading with implemented BMPs	• Decrease annual loading with implemented BMPs
2. THREATENED AND ENDANGERED SPECIES				
2.1 Species/Populations Affected (Wildlife)	Acreage	• 3.7 acres of least Bell's vireo habitat	• 3.6 acres of least Bell's vireo habitat	• 3.7 acres of least Bell's vireo habitat
		• 1.7 acres of occupied SBKR habitat	• 1.8 acres of occupied SBKR habitat	• 1.7 occupied SBKR habitat
		• 1.5 acres of reinstated SBKR critical habitat (2002)	• 1.5 acres of reinstated SBKR critical habitat (2002)	• 1.5 acres of reinstated SBKR critical habitat (2002)
2.2 Species/Populations Affected (Plants)	Acreage (temporary and permanent impacts)	• 0.36 acre of occupied San Jacinto valley crownscale habitat	• 0.36 acre of occupied San Jacinto valley crownscale habitat	• 0.36 acre of occupied San Jacinto valley crownscale habitat
		• 1.09 acres of occupied spreading navarretia habitat and final critical habitat (2008) with primary constituent elements	• 1.09 acres of occupied spreading navarretia habitat and final critical habitat (2008) with primary constituent elements	• 1.09 acres of occupied spreading navarretia habitat and final critical habitat (2008) with primary constituent elements
3. PLANT COMMUNITIES				
3.1 Sensitive Plant Communities Affected	Acreage (temporary and permanent impacts)	• 87.0 acres of Riversidean upland sage scrub	• 87.0 acres of Riversidean upland sage scrub	• 87.0 acres of Riversidean upland sage scrub
		• 27.8 acres of San Jacinto River alkali communities (20.9 acres permanent [2.2 acres due to bridge fill, 8.5 acres due to bridge shading, and 10.2 acres of other permanent impacts], 7.2 acres temporary)	• 27.8 acres of San Jacinto River alkali communities (20.9 acres permanent [2.2 acres due to bridge fill, 8.5 acres due to bridge shading, and 10.2 acres of other permanent impacts], 7.2 acres temporary)	• 29.9 acres of San Jacinto River alkali communities (26.6 acres permanent [10.6 acres due to bridge fill, 4.8 acres due to bridge shading, and 11.2 acres of other permanent impacts], 3.5 acres temporary)
		• 5.1 total acres of riparian habitat (2.4 acres permanent, 2.7 acres temporary)	• 4.2 total acres of riparian habitat (3.4 acres permanent, 0.8 acre temporary)	• 5.1 total acres of riparian habitat (2.4 acres permanent, 2.7 acres temporary)

Table 3.18.E: Detail Matrix of the Evaluation of Alternative 9 Modified Design Variations

Criteria	Values (Metrics)	Alternative 9 Modified		
		Base Case Design	SJN DV	SJRB DV
4. EFFECTS ON SKR HCP				
4.1 SKR HCP Reserves	Require Acquisition of Reserve Land (Y/N)	No	No	No
5. EFFECTS ON WESTERN RIVERSIDE COUNTY MSHCP				
5.1 MSHCP Consistency Determination	Consistency Determination Required (Y/N)	Yes	Yes	Yes
		• 191.9 acres affected of Criteria Area	• 192.8 acres affected of Criteria Area	• 194.0 acres affected of Criteria Area
5.2 Conservation Goals	Acreage Affected of MSHCP Criteria Area, Public/Quasi-Public Lands,[4] and MSHCP Conservation Area (Cores/Linkages) (temporary and permanent impacts)	• 1.46 acres of temporary impacts to PQP lands	• 1.46 acres of temporary impacts to PQP lands	• 1.46 acres of temporary impacts to PQP lands
		• 62–68 acres affected of Conservation Area	• 62–68 acres affected of Conservation Area	• 64–70 acres affected of Conservation Area
5.4 Mitigation Acreage Required	Acreage	Not applicable	Not applicable	11 acres of riparian habitat and 35 acres of alkaline riverine habitat
5.5 Mitigation Acreage Available	Y/N	Not applicable	Not applicable	Yes
6. SECTION 4(f) RESOURCES				
6.1 Section 4(f) Resources - Direct Use[4]	Total Section 4(f) Resources, Acreage, and Cultural Sites	• 5.18 acres of P-33-16598 (CA RIV 8712) Multiuse Prehistoric Site Cultural Site	• 5.18 acres of P-33-16598 (CA RIV 8712) Multiuse Prehistoric Site Cultural Site	• 5.18 acres of P-33-16598 (CA RIV 8712) Multiuse Prehistoric Site Cultural Site
		• Four archaeological sites determined to be eligible for the National Register	• Four archaeological sites determined to be eligible for the National Register	• Four archaeological sites determined to be eligible for the National Register
6.2 Section 4(f) Resources - constructive use	Number of Section 4(f) Resources	None	None	None
7. SECTION 6(f) LANDS				
7.1 Section 6(f) Lands Affected	Acreage	None	None	None
8. CULTURAL RESOURCES (includes sites not eligible for National Register)				
8.1 Prehistoric Archaeological Resources	Number of Sites	Adverse effects to five sites (P-33-16598, P-33-9862, P-33-19863, P-33-19864, and P-33-19866) and avoidance of P-33-3653 with an ESA.	Adverse effects to five sites (P-33-16598, P-33-9862, P-33-19863, P-33-19864, and P-33-19866) and avoidance of P-33-3653 with an ESA.	Adverse effects to five sites (P-33-16598, P-33-9862, P-33-19863, P-33-19864, and P-33-19866) and avoidance of P-33-3653 with an ESA.
8.2 Historic Archaeological/Architectural Resources	Number of Sites	0 sites	0 sites	0 sites
8.3 Sacred Sites	Number of Sites	1 site	1 site	1 site
9. LAND USE IMPACTS				
9.1a Access Impacts (Business)	Ranking 1-3 (1 Least Impact, 3 Worst Impact)	1	3	1
9.1b Access Impacts (Residential)	Ranking 1-3 (1 Least Impact, 3 Worst Impact)	1	3	1
9.2a Cities of San Jacinto and Perris	Inconsistencies	• Inconsistent with designated roadways and land uses for the City of Perris General Plan focused along Placentia Avenue.	• Inconsistent with designated roadways and land uses for the City of Perris General Plan focused along Placentia Avenue.	• Inconsistent with designated roadways and land uses for the City of Perris General Plan focused along Placentia Avenue.
		• Amendments to San Jacinto General Plan required to reflect either SJN or SJS DV alignment at east end of MCP.	• Amendments to San Jacinto General Plan required to reflect either SJN or SJS DV alignment at east end of MCP.	• Amendments to San Jacinto General Plan required to reflect either SJN or SJS DV alignment at east end of MCP.

Table 3.18.E: Detail Matrix of the Evaluation of Alternative 9 Modified Design Variations

Criteria	Values (Metrics)	Alternative 9 Modified		
		Base Case Design	SJN DV	SJRB DV
9.2b County of Riverside	Inconsistencies	• Inconsistent with Land Use Policies LU 16.2 and 16.4, which protect agricultural lands.	• Inconsistent with Land Use Policies LU 16.2 and 16.4, which protect agricultural lands.	• Inconsistent with Land Use Policies LU 16.2 and 16.4, which protect agricultural lands.
9.3 Farmland Impacts	Acreage	Prime Farmland 190.95 acres, Farmland of State Importance 149.91 acres, Unique Farmland 47.49 acres, Farmland of Local Importance 578.57 acres, and Grazing Land 74.87 acres. **(Total: 1,041.79 acres)**	Prime Farmland 191.19 acres, Farmland of State Importance 1498.27 acres, Unique Farmland 49.27 acres, Farmland of Local Importance 518.88 acres, and Grazing Land 74.87 acres. **(Total: 1,032.55 acres)**	Prime Farmland 190.95 acres, Farmland of State Importance 149.91 acres, Unique Farmland 47.49 acres, Farmland of Local Importance 580.69 acres, and Grazing Land 74.87 acres. **(Total: 1,043.91 acres)**
10. SOCIOECONOMIC/COMMUNITY IMPACTS				
10.1 Business Displacements	Property acquisitions & employees displaced	• 103 non-residential property acquisitions	• 93 non-residential property acquisitions	• 103 non-residential property acquisitions
		• 37 businesses displaced	• 35 businesses displaced	• 37 businesses displaced
		• 188 employees potentially displaced	• 207 employees potentially displaced	• 188 employees potentially displaced
10.2 Residential Displacements	Property acquisitions & occupants displaced	• 103 residential property acquisitions	• 105 residential property acquisitions	• 103 residential property acquisitions
		• 659 occupants displaced	• 675 occupants displaced	• 659 occupants displaced
10.3 Travel Pattern Disruptions	Ranking 1-3 (1 Least Impact, 3 Worst Impact)	2	2	2
10.4 Environmental Justice Concerns	Impacts to minority/low-income populations	• Does not result in disproportionate impacts to environmental justice populations	• Does not result in disproportionate impacts to environmental justice populations	• Does not result in disproportionate impacts to environmental justice populations
10.5 Community Service Disruptions (EMS, fire, police)	Property acquisitions (Y/N)	No	No	No
10.6 Neighborhood/Community Impacts	Y/N	Yes	Yes	Yes
10.7 Schools	Direct Impacts	• No direct impact to schools.	• No direct impact to schools.	• No direct impact to schools.
10.8 Support by local jurisdictions, community groups, and public	Support/Opposition	• City of Perris identified Alternative 9 Modified as its preferred alternative	• City of San Jacinto opposes the SJN DV	• Riverside County prefers the SJRB DV over the Base Case
11. AIR QUALITY IMPACTS				
11.1 Criteria Pollutant Emissions in the MCP Region	Emissions in lbs/day	• 100.96 tons/day of CO	• 100.96 tons/day of CO	• 100.96 tons/day of CO
		• 5.53 tons/day of ROG	• 5.53 tons/day of ROG	• 5.53 tons/day of ROG
		• 26.18 tons/day of NO_X	• 26.18 tons/day of NO_X	• 26.18 tons/day of NO_X
		• 0.60 ton/day of SO_X	• 0.60 ton/day of SO_X	• 0.60 ton/day of SO_X
		• 5.82 tons/day of PM_{10}	• 5.82 tons/day of PM_{10}	• 5.82 tons/day of PM_{10}
11.2 Exceeds NAAQS Emission Standards	Y/N	No	No	No
12. NOISE IMPACTS				
12.1 Sensitive Receptors Affected	Number of Modeled Receptors Affected	• Of the 355 modeled receptors, 66 receptors approach or exceed the 67 dBA L_{eq} NAC and 150 receptors would experience a substantial increase in noise of 12 dB or more.	• Of the 355 modeled receptors, 66 receptors approach or exceed the 67 dBA L_{eq} NAC and 150 receptors would experience a substantial increase in noise of 12 dB or more.	• Of the 355 modeled receptors, 66 receptors approach or exceed the 67 dBA L_{eq} NAC and 150 receptors would experience a substantial increase in noise of 12 dB or more.

Table 3.18.E: Detail Matrix of the Evaluation of Alternative 9 Modified Design Variations

Criteria	Values (Metrics)	Alternative 9 Modified		
		Base Case Design	SJN DV	SJRB DV
12.2 Amount of Mitigation Feasible	Number and Length of Sound Barriers	• 6 Sound Barriers	• 6 Sound Barriers	• 6 Sound Barriers
		• 21,095 linear feet	• 21,095 linear feet	• 21,095 linear feet

Note: The references and sources for this table are the same as those provided in Table 3.18.E.

[1] Construction cost does not include mitigation costs for each alternative.
[2] Environmental Mitigation Costs include cost to purchase acreage for mitigation, wildlife undercrossing, and the San Jacinto River Bridge in the Lakeview area.
[3] The Section 404 No Action Alternative was deemed to be not practicable because of its high cost; therefore, it was not analyzed under the Environmental Criteria.
[4] After the NEPA/404 Checkpoint 3 process, the alignment of the Build Alternatives was refined to avoid the use of any land in the San Jacinto Wildlife Area.

BMP = best management practice
CETAP = Community and Environmental Transportation Acceptability Process
CO = carbon monoxide
CO_2 = carbon dioxide
dB = decibels
dBA = A-weighted decibels
EIR = Environmental Impact Report
EIS = Environmental Impact Statement
EMS = Emergency Medical Services
ERDC = Engineer and Research Development Center
ESA = Environmentally Sensitive Area
HCP = Habitat Conservation Plan
lbs/day = pounds per day
L_{eq} = equivalent continuous sound level
MCP = Mid County Parkway
MSHCP = Multiple Species Habitat Conservation Plan
NAAQS = National Ambient Air Quality Standards
NAC = Noise Abatement Criteria
National Register = National Register of Historic Places
NEPA = National Environmental Policy Act
NO_X = nitrogen oxides
PM_{10} = particulate matter less than 10 microns in size
$PM_{2.5}$ = particulate matter less than 2.5 microns in size
PQP = Public/Quasi-Public
RDEIR = Recirculated Draft Environmental Impact Report
RDEIS = Recirculated Draft Environmental Impact Statement
ROG = reactive organic gases
ROW = right of way
SAMP = Special Area Management Plan
SBKR = San Bernardino kangaroo rat
SJN = San Jacinto North
SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation
SJS = San Jacinto South
SKR = Stephens' kangaroo rat
SO_X = oxides of sulfur
SR-79 = State Route 79
STAA = Surface Transportation Assistance Act
USACE = United States Army Corps of Engineers
Y/N = yes/no

Analysis of the Alignment Alternatives

Table 3.18.D addresses the selection criteria for each alternative. This matrix describes the "value" or "metric" for each criterion (some are quantitative while others are "yes/no"). The No Project Alternatives are not included in the matrices in Tables 3.18.D and 3.18.E because they do not meet the project Purpose and Need. Based on the results of the evaluation of the selection criteria for the Build Alternatives summoned in Table 3.18.D, Alternative 9 Modified was recommended to be designated as the preliminary LEDPA alignment in the Final EIR/EIS.

In general, the environmental impacts of Alternative 4 Modified are consistently greater than the impacts of Alternatives 5 Modified and 9 Modified. Based on the key evaluation criteria for the Build Alternatives in Table 3.18.D, the impacts to natural resources are not substantially different among the Build Alternatives, particularly east of the City of Perris due to the common alignment in that area, and particularly for Alternatives 5 Modified and 9 Modified. Alternative 9 Modified has slightly more total (permanent and temporary) impacts to federal jurisdictional waters than Alternative 5 Modified (0.6 acre), and is ranked slightly higher than Alternative 5 Modified in hydrology impacts (normalized rank score of 8.9 for Alternative 5 Modified and 9.2 for Alternative 9 Modified), but has lower water quality impacts. Alternative 9 Modified has lower impacts to Riversidean upland scrub communities than Alternative 5 Modified (by 2.4 acres), and less impacts to public/quasi-public (PQP) lands.

With respect to land use and socioeconomic impacts, Alternative 9 Modified has substantially fewer business and employee displacements. Although Alternative 9 Modified has the highest residential displacements, it would not result in a disproportionate impact to minority/low income populations, whereas Alternative 5 Modified would result in such impacts because of its impacts to employment-generating land uses. Alternative 9 Modified has the least impacts to designated farmland overall and Prime Farmland, and is the only alternative with no impacts to schools. The City of Perris has selected Alternative 9 Modified as its locally preferred alternative, and has expressed interest in selecting an alternative that is least impacting to businesses and employment in its community.

Finally, Alternative 9 Modified is the most cost-effective Build Alternative, costing $110 million (over 7 percent) less than Alternative 5 Modified and $490 million (30 percent) less than Alternative 4 Modified.

Conclusion of the Analysis of the Design Variations

This section summarizes the analysis of the SJRB DV and the SJN DV compared to the Base Case Alternative 9 Modified alignment detailed in Table 3.18.E.

SJRB DV

Because the SJRB DV requires less bridge structure to construct than the Base Case design, this Design Variation would result in a cost savings of $30 million in limited public transportation funds. However, the SJRB DV would result in additional impacts for the following environmental criteria:

1.3 (Aquatic Ecosystem Functions and Values): The SJRB DV has a higher sum (i.e., a worse ranking) of normalized rank scores with a score of 10.8, compared to the Base Case score of 9.2.

1.6 (Water Quality Construction Impacts): The SJRB DV would have 3.5 acres (0.3 percent) more of soil disturbance compared to the Base Case.

3.1 (Sensitive Plant Communities Affected): The SJRB DV would result in permanent impacts to 5.8 acres (28 percent) more of San Jacinto River alkali plant communities than the Base Case or the SJN DV. For the Base Case bridge, the 20.9 acre area of permanent impacts includes 2.2 acres due to fill, 8.5 acres due to shading, and 10.2 acres along the Ramona Expressway within existing fill; while for the SJRB DV, the 26.6 acre area of permanent impacts includes 10.6 acres due to fill, 4.8 acres due to shading, and 11.2 acres along the Ramona Expressway within existing fill. With regard to temporary construction impacts, the Base Case bridge results in 7.2 acres of impacts to San Jacinto River alkali plant communities compared to 3.5 acres of temporary construction impacts under the SJRB DV. As part of the Western Riverside County MSHCP consistency determination process, the RCTC has committed to mitigating permanent and temporary impacts to San Jacinto River alkali plant communities by acquiring (as well as restoring and/or enhancing) 76.6 acres of similar habitat within the vernal pool complex in Noncontiguous Habitat Block 7 of the Western Riverside County MSHCP Criteria Area, because that area has similar soils and known sensitive plant locations, or within the Lakeview area.

5 (Effects on Western Riverside County MSHCP): The SJRB DV would affect 1 to 2 acres (up to 1 percent) more of Western Riverside County MSHCP Criteria Area than the Base Case. These slightly greater effects on

the Western Riverside County MSHCP Criteria Area are anticipated and allowed by the Western Riverside County MSHCP because the MCP is a Covered Activity, and the SJRB DV is within the bounds of what was contemplated for the MCP project impacts in the Western Riverside County MSHCP. The SJRB DV is consistent with the Western Riverside County MSHCP (refer to the "MCP MSHCP Consistency Determination and Determination of Biological Equivalent or Superior Preservation" provided in Appendix T in this Final EIR/EIS), and, therefore, impacts to the Criteria Area have been considered and mitigated for in compliance with the Western Riverside County MSHCP.

While the SJRB DV has greater impacts under the four environmental criteria described above, it does not result in additional impacts to waters of the U.S. or additional impacts to any other listed or special-status plant or animal species associated with this area. In addition, the County of Riverside has expressed a preference for this Design Variation because of the substantial cost savings, resulting in the ability for the RCTC and the County to fund other needed transportation improvements in western Riverside County. Therefore, when considering the additional impacts to San Jacinto River alkali plant communities and the Western Riverside County MSHCP Criteria Area and Conservation Area noted above (both of which are fully mitigated through RCTC's compliance with the Western Riverside County MSHCP) in comparison to the extra cost of $30 million for the longer bridge (i.e., the Base Case design), the SJRB DV is a cost-effective Design Variation that is acceptable to the affected community and will meet the project purpose with minimal additional environmental impacts.

SJN DV

Although the SJN DV would cost $80 million less than the Alternative 9 Modified Base Case design, the SJN DV is not acceptable to the City of San Jacinto, the local community directly affected by the SJN DV. Although the City of San Jacinto shows both the SJN DV and the more southerly Base Case MCP alignment on its General Plan Circulation Element map, the City of San Jacinto has been on record supporting the southerly Base Case MCP alignment as its preferred alignment since 2007 because of its greater compatibility with future land uses. Since that time, the City has been actively working with local property owners and developers to preserve land for the southerly Base Case MCP alignment, while looking to focus future land use

entitlements and economic development in the northerly area. As noted in the City's comment letter on the Recirculated Draft EIR/Supplemental Draft EIS dated March 21, 2013, *"The southerly alignment, which the DEIR presents as the City's preferred alternative, has the support of the City Council, local land owners and the development community. Furthermore, it has less impact on the San Jacinto River floodplain and its alignment is almost entirely on vacant land."*

In addition to this local preference by the City of San Jacinto, the SJN DV has the following adverse effects under the following criteria:

II.2 (Technological Constraints): The SJN DV does not meet Caltrans' design criteria for interchange spacing.

III.1.1 (Aquatic Resources): Although the SJN DV impacts less acreage of federal jurisdictional waters, the waters that are impacted have a higher value than the federal jurisdictional waters impacted by the southerly Base Case alignment. In addition, the SJN DV impacts slightly more area of state jurisdictional waters.

III.1.4 (Floodplains): The SJN DV results in slightly greater floodplain impacts than the southerly Base Case alignment.

III.3 (Plant Communities): The SJN DV results in 3.4 acres of permanent impacts to riparian habitat, compared to 2.4 acres under the southerly Base Case alignment.

III.9 (Land Use): The SJN DV results in greater loss of access for existing and future land uses than the southerly Base Case alignment.

Although the $80 million cost savings of the SJN DV is a desirable benefit (just as the $30 million cost savings is for the SJRB DV), the SJN DV is unacceptable to the affected community (the City of San Jacinto), and it also results in additional impacts that would not occur under the southerly Base Case alignment.

Preliminary LEDPA Determination

Based on the analyses described above, Alternative 9 Modified, with the SJRB DV and the Base Case southerly alignment through the City of San Jacinto, was recommended as the Preliminary LEDPA.

A coordination meeting with the USFWS, the USACE, and EPA was held on December 18, 2013. FHWA formally requested each agency's Concurrence/ Agreement on the Preliminary LEDPA in letters to those three agencies dated December 19, 2013.

In a letter dated February 6, 2014, the USACE concurred with the determination that Alternative 9 Modified with the San Jacinto River Bridge Design Variation is the preliminary LEDPA.

In a letter dated February 10, 2014, the EPA agreed that the Alternative 9 Modified Base Case design, with the Base Case southerly alignment and the San Jacinto River Bridge Design Variation is the preliminary LEDPA.

In a letter dated February 18, 2014, the USFWS agreed with the selection of Alternative 9 Modified with the bridge design variation as the preliminary LEDPA subject to the inclusion of mitigation that provides biologically equivalent or superior preservation of sensitive alkali plant species.

In letters dated April 16, 2014, Caltrans notified the USFWS, the USACE, and the EPA that the transportation agencies (FHWA, RCTC, and Caltrans) made the decision to identify Alternative 9 Modified with the San Jacinto River Bridge Design Variation as the Preliminary LEDPA for the MCP project. This completed compliance with Checkpoint 3 in the NEPA/404 MOU.

The correspondence cited above is provided in Appendix J, Supplemental Chapter 5 Attachments in this Final EIR/EIS.

No Build Alternatives

Under Alternative 1A, the planned street network would be constructed, except for improvements to the Ramona Expressway. Because the Ramona Expressway would remain as it exists today, there would be no permanent impacts to wetlands along this roadway under Alternative 1A. Therefore, permanent impacts to wetlands and other waters in the vicinity of Ramona Expressway would be less for Alternative 1A than impacts that would occur as a result of the MCP Build Alternatives.

Under Alternative 1B, the planned street network would be developed according to the Circulation Element of the Riverside County General Plan. Under Alternative 1B, permanent impacts to wetlands and other waters would be expected to be less than for the MCP Build Alternatives because Ramona Expressway would be widened (and

would have a smaller footprint than the MCP project), and the MCP project would not be built.

3.18.3.2 Watershed Level Riparian Ecosystem Integrity Assessment of Impacts

Potential direct and indirect impacts of alternative corridor alignments on the hydrologic, water quality, and habitat integrity of riparian ecosystems were assessed by simulating the changes that would result if MCP Build Alternatives were built. The assessment then compared the simulated post-project assessment results to pre-project baseline assessment results in terms of various assessment criteria.

The *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* provides estimates of the changes in hydrologic integrity, water quality integrity, and habitat integrity as a result of project implementation (i.e., changes in functional capacity). The analysis was performed by Engineer Research Development Center scientists to gain a better understanding of the quality or functional integrity of the aquatic resources that would be affected by the MCP Build Alternatives and to help quantify the conditional effects attributed to direct and indirect project impacts at three different spatial scales.

Seventeen assessment criteria were used to evaluate the impacts of each MCP Build Alternative to waters of the United States and riparian ecosystems. These indicators represent the physical, chemical, and biological characteristics and processes of riparian ecosystems at three spatial levels: (1) the riparian reach proper, (2) uplands adjacent to the riparian reach, and (3) the drainage basin of the riparian reach. Multiple indicators related to land use/land cover, vegetation communities, hydrology, sediment, and disturbance factors were used. The integrity scores from this assessment are intended to be considered in conjunction with the impact acreages described above in Section 3.18.3.1 to provide a more holistic evaluation of the aquatic resource functional losses, rather than relying solely on the acreages of impact. Scores are reported for each individual criterion, as well as the sum of normalized rank scores, each representing a change in functional capacity (e.g., loss or gain in hydrologic integrity, water quality integrity, and/or habitat integrity). The results of this assessment are summarized for each MCP Build Alternative in Table 3.18.F.

Table 3.18.F Normalized Rank Scores of All Criteria for Alternatives Corridor Alignments

Alternative	Conditional Assessment Criteria																		Grand Total (Sum of) Normalized Rank Scores
	Hydrology Based Criteria											Species/Habitat Based Criteria							
	1	2	3	4	7a	7b	7c	8a	8b	8c	Subtotal	5a	5b	5c	5d	5e	5f	6	Subtotal	
Alt 4 Mod	0.97	0.83	0.61	0.77	1.00	1.00	1.00	1.00	1.00	1.00	9.18	0.00	0.00	0.00	1.00	0.02	0.91	0.96	2.89	12.07
Alt 4 Mod SJN DV	0.97	1.00	0.39	0.81	0.97	0.98	1.00	0.87	0.23	0.62	7.84	0.00	0.00	0.00	0.89	0.02	0.91	1.00	2.82	10.66
Alt 4 Mod SJRB DV	1.00	0.83	1.00	0.88	1.00	1.00	1.00	1.00	1.00	1.00	9.71	0.00	0.00	0.00	1.00	1.00	1.00	0.97	3.97	13.67[1]
Alt 5 Mod	1.00	0.78	0.49	0.89	0.51	0.50	0.49	0.89	0.20	0.31	6.06	0.00	0.00	0.00	1.00	0.02	0.91	0.92	2.85	8.89[1]
Alt 5 Mod SJN DV	1.00	0.96	0.26	0.94	0.48	0.48	0.48	0.90	0.19	0.54	6.23	0.00	0.00	0.00	0.89	0.02	0.91	0.95	2.77	9.00
Alt 5 Mod SJRB DV	0.98	0.78	0.88	1.00	0.51	0.50	0.48	0.89	0.20	0.31	6.53	0.00	0.00	0.00	1.00	1.00	1.00	0.92	3.92	10.44[1]
Alt 9 Mod	0.98	0.79	0.52	0.75	0.64	0.64	0.63	0.88	0.21	0.34	6.38	0.00	0.00	0.00	1.00	0.02	0.91	0.86	2.79	9.17
Alt 9 Mod SJN DV	0.98	0.97	0.30	0.79	0.62	0.62	0.63	0.88	0.21	0.34	6.34	0.00	0.00	0.00	0.89	0.02	0.91	0.90	2.72	9.04[1]
Alt 9 Mod SJRB DV	0.98	0.79	0.91	0.85	0.64	0.64	0.63	0.88	0.21	0.34	6.87	0.00	0.00	0.00	1.00	1.00	1.00	0.86	3.86	10.75[1]

Source: *Potential Impacts of Alternative Corridor Alignments to Waters of the U.S., Riparian Ecosystems and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California,* adapted from Smith 2011 and LSA 2011.

Criterion 1: Nonwetland waters stream channels directly impacted.
Criterion 2: Main stem and tributary stream channels directly impacted.
Criterion 3: Riparian ecosystems directly impacted.
Criterion 4: Aquatic resources directly impacted.
Criterion 7a: Change in the quantity of hydrologic integrity units in riparian ecosystems directly impacted.
Criterion 7b: Change in the quantity of water quality integrity units in riparian ecosystems directly impacted.
Criterion 7c: Change in the quantity of habitat integrity units in riparian ecosystems directly impacted.
Criterion 8a: Change in quantity of hydrologic integrity units in riparian ecosystems directly and indirectly impacted.
Criterion 8b: Change in quantity of water quality integrity units in riparian ecosystems directly and indirectly impacted.
Criterion 8c: Change in quantity of habitat integrity units in riparian ecosystems directly and indirectly impacted.
Criterion 5a: Critical habitat of California gnatcatcher directly impacted.
Criterion 5b: Critical habitat of Quino Checkerspot butterfly directly impacted.
Criterion 5c: Reserve areas of Stephens' kangaroo rat directly impacted.
Criterion 5d: Critical habitat of San Bernardino kangaroo rat directly impacted.
Criterion 5e: Critical habitat of spreading navarretia directly impacted.
Criterion 5f: Western Riverside County Multiple Species Habitat Conservation Plan areas directly impacted.
Criterion 6: Areas of observed habitat for selected threatened, endangered, and sensitive species directly impacted.

[1] Due to rounding to nearest hundredth, total sum appears to have variance of up to 0.02.

Alt = Alternative
Mod = Modified
SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation

As shown in Table 3.18.F, the MCP Build Alternatives exhibit relatively small differences in the impacts for the different criteria; these small differences reflect the minor differences in the specific location and/or size of the right-of-way footprint for each alternative. According to the Engineer Research Development Center's report, the minimal potential impact of the MCP Build Alternatives can be attributed to the initial strategic placement and ongoing refinement of the alternative corridor alignments to largely avoid riparian ecosystems, aquatic resources, and threatened, endangered, and sensitive species critical habitat.

3.18.3.3 Temporary Impacts

Build Alternatives

As discussed in Section 3.18.3.1, Permanent Impacts, the analysis of impacts is based on a worst-case impact scenario in which all areas within the right-of-way footprint are calculated as permanent impacts, with the exception of areas spanned by bridges. As a result, temporary impacts, as well as permanent impacts to USACE and CDFW jurisdictional areas, have been identified at bridged areas.

The temporary impacts were calculated with the assumption that the majority of bridged areas would be temporarily affected due to construction access within the right of way. Key MCP Build Alternatives were designed to place the bridge supports outside of jurisdictional areas as much as possible. However, because the specific location of each bridge support has not been finalized, permanent impacts were calculated conservatively at 10 percent, with the remaining 90 percent of the bridged areas calculated as temporary impacts. Typically, temporary impacts also include a buffer around bridged areas, extending to the project footprint, for the construction of bridge structures. Additional areas, based on grading plans, that the project engineer determined would be avoided or would consist of temporary impacts were also assessed individually for each bridge location. These bridges are summarized in the table "Mid County Parkway – Summary of Bridge Descriptions and Avoidance of Jurisdictional Areas" provided in Appendix I (Attachment D).

Table 3.18.G summarizes the acres of temporary impacts to CDFW jurisdictional riparian habitat and streambeds, and USACE jurisdictional wetlands and nonwetland waters for the three MCP Build Alternatives (4 Modified, 5 Modified, and 9 Modified) and their design variations.

Table 3.18.G Temporary Impacts to Wetlands and Other Jurisdictional Areas

Modified Alternative/ Design Variation	Temporary Impacts (acres)[1]			
	CDFW	USACE		
		Nonwetlands	Wetlands	Total
Alternative 4 Modified	5.48	2.28	3.78	6.06
Alternative 4 Modified SJN DV	4.10	2.10	1.95	4.05
Alternative 4 Modified SJRB DV	5.48	2.28	3.78	6.06
Alternative 5 Modified	3.96	1.41	3.11	4.53
Alternative 5 Modified SJN DV	2.58	1.24	1.28	2.52
Alternative 5 Modified SJRB DV	3.96	1.42	3.11	4.53
Alternative 9 Modified	4.69	1.63	3.63	5.26
Alternative 9 Modified SJN DV	3.31	1.45	1.80	3.25
Alternative 9 Modified SJRB DV	4.69	1.63	3.63	5.26

Source: *Errata Memorandum for the Supplement to the Natural Environment Study,* November 2012.

[1] Excludes impacts to jurisdictional areas that are within the MCP/SR-79 interchange footprint, which are wholly attributable to the SR-79 Realignment Project (i.e., jurisdictional areas that will be impacted by the SR-79 project prior to construction of the MCP project and will be mitigated by the SR-79 project).

CDFW = California Department of Fish and Wildlife
MCP = Mid County Parkway
SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation
SR-79 = State Route 79
USACE = United States Army Corps of Engineers

Table 3.18.H, provides a further breakdown of type and condition of temporary impacts to USACE jurisdictional wetlands and nonwetland waters of the U.S.

No Build Alternatives

Under Alternative 1A, the planned street network would be constructed, except for improvements to the Ramona Expressway. Because the Ramona Expressway would remain as it is today, there would be no permanent impacts to wetlands along this roadway under Alternative 1A. Therefore, permanent impacts to wetlands and other waters in the vicinity of Ramona Expressway would be less for Alternative 1A than the impacts that would occur as a result of the MCP Build Alternatives.

Under Alternative 1B, the planned street network would be developed according to the Circulation Element of the Riverside County General Plan. Under Alternative 1B, permanent impacts to wetlands and other waters would be expected to be less than the impacts for the MCP Build Alternatives because Ramona Expressway would be widened (and would have a smaller footprint than the MCP project) and the MCP project would not be built.

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Table 3.18.H Temporary Impacts to USACE Jurisdictional Wetlands and Nonwetland Waters by Drainage System

Reach	Drainage System Identifier	Condition (Habitat Integrity[1])	Alternative 4 Modified (Temporary Impacts, Acres)						Alternative 5 Modified (Temporary Impacts, Acres)						Alternative 9 Modified (Temporary Impacts, Acres)					
			Base Case Design (SJS)		SJN DV		SJRB DV		Base Case Design (SJS)		SJN DV		SJRB DV		Base Case Design (SJS)		SJN DV		SJRB DV (Preferred Alternative)	
			USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands	USACE Nonwetland Waters	USACE Wetlands
5																				
5	Miscellaneous	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5 Total			—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6																				
6	57	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	58	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	59	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6	60	Low	1.38	0.81	1.38	0.81	1.38	0.81	0.52	0.14	0.52	0.14	0.52	0.14	0.73	0.66	0.73	0.66	0.73	0.66
6	Miscellaneous	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6 Total			**1.38**	**0.81**	**1.38**	**0.81**	**1.38**	**0.81**	**0.52**	**0.14**	**0.52**	**0.14**	**0.52**	**0.14**	**0.73**	**0.66**	**0.73**	**0.66**	**0.73**	**0.66**
7																				
7	61	Low	0.01	0.44	0.01	0.44	0.01	0.44	0.01	0.44	0.01	0.44	0.01	0.44	0.01	0.44	0.01	0.44	0.01	0.44
7	63	Low	—	0.15	—	0.15	—	0.15	—	0.15	—	0.15	—	0.15	—	0.15	—	0.15	—	0.15
7	Miscellaneous	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
7 Total			**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**	**0.01**	**0.59**
8																				
8	64	Low	0.05	0.73	—	—	0.05	0.73	0.05	0.73	—	—	0.05	0.73	0.05	0.73	—	—	0.05	0.73
8	65	Low	0.16	0.66	0.05	—	0.16	0.66	0.16	0.66	0.05	—	0.16	0.66	0.16	0.66	0.05	—	0.16	0.66
8	66	Medium	—	0.99	0.01	0.55	—	0.99	—	0.99	0.01	0.55	—	0.99	—	0.99	0.01	0.55	—	0.99
8	67	Medium	0.68	—	0.65	—	0.68	—	0.68	—	0.65	—	0.68	—	0.68	—	0.65	—	0.68	—
8	Miscellaneous	Low	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
8 Total			**0.89**	**2.38**	**0.71**	**0.55**	**0.89**	**2.38**	**0.89**	**2.38**	**0.71**	**0.55**	**0.89**	**2.38**	**0.89**	**2.38**	**0.71**	**0.55**	**0.89**	**2.38**
Total			**2.28**	**3.78**	**2.10**	**1.95**	**2.28**	**3.78**	**1.42**	**3.11**	**1.24**	**1.28**	**1.42**	**3.11**	**1.63**	**3.63**	**1.45**	**1.80**	**1.63**	**3.63**

Source: *Draft 404(B)(1) Alternatives Analysis, Mid County Parkway* (November 2012) (provided in Appendix M in the Recirculated Draft EIR/Supplemental Draft EIS).

[1] Condition of drainage system is based on ranking of Habitat Integrity Index as identified by Robert Smith in *Assessment of Riparian Ecosystem Integrity: San Jacinto River Watershed, Riverside County, California,* 2002. The habitat integrity of the drainage systems identified by Smith were used as a reference for other drainage systems in the study area. For purposes of this analysis, low habitat integrity is based on Smith's integrity index <0.4; medium habitat integrity is 0.4-0.7; and high habitat integrity would be >0.7.

SJN DV = San Jacinto North Design Variation
SJRB DV = San Jacinto River Bridge Design Variation
SJS = San Jacinto South
USACE = United States Army Corps of Engineers

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3.18.4 Refinements to Preferred Alternative Impact Analysis

Following the preliminary determination of the LEDPA in consultation with CDFW, USFWS, USEPA, and USACE, RCTC continued to refine the project design and consult with these agencies. Consequently, the calculated impacts to wetland, other waters and associated habitats have been slightly revised. As described in Section 2.5.6 of this Final EIR/EIS, these revisions are primarily due to minor alignment shifts, structure revisions and a request by the agencies to consider narrow areas between bridges as shade impacts, in addition to the areas directly under bridges. The revised calculations derived from these refinements are summarized in Table 3.18.I.

Table 3.18.I Summary of Impacts of the Preferred Alternative (Alternative 9 Modified with the SJRB DV) on Wetlands and Other Waters

Resource	Impact of the Preferred Alternative (acres)
USACE Jurisdictional Waters/Wetlands (Impacts to waters of the United States)	
Permanent impacts to wetlands	0.64
Permanent impacts to non-wetland waters	4.36
Total permanent impacts	**5.00**
Temporary impacts to wetlands	4.69
Temporary impacts to non-wetland waters	1.99
Total temporary impacts	**6.68**
California Department of Fish and Wildlife Jurisdiction	
Permanent impacts	7.94
Temporary impacts	3.63

Source: *Habitat Mitigation and Monitoring Plan for USACE Jurisdictional Waters* (February 2015) provided in Appendix D of the Final EIR/EIS.

3.18.5 Wetlands Only Practicable Finding

Section 404(b)(1) of the federal CWA requires projects involving federal action to demonstrate that measures have been taken to avoid and minimize impacts to waters of the United States, including wetlands. Furthermore, EO 11990 (Protection of Wetlands) directs federal agencies to "…avoid to the extent possible the long and short term adverse impacts associated with the destruction or modification of wetlands…"

Section 2.2.1, Development of the MCP Alternatives, of this EIR/EIS describes how RCTC, FHWA, and Caltrans worked with USACE, USEPA, USFWS, and CDFW through the NEPA/404 Integration MOU process to develop alternatives to address the project purpose while avoiding or minimizing impacts to waters of the United States.

Once the initial range of alternatives was identified, preliminary engineering was conducted to avoid or minimize impacts to waters of the United States. As discussed in Section 2.3.4.3, Section 404 No Action Alternative, an alternative was developed that would completely avoid any dredge or fill within wetlands and other waters of the United States. However, the Section 404 No Action Alternative was not considered practicable because it would add an additional cost of $340 million (approximately 21 percent more than Alternative 9 Modified) and was thus determined to be unreasonably expensive. Alternative 4 Modified, Alternative 5 Modified, and Alternative 9 Modified evaluated in this EIR/EIS, have been determined to be practicable as they relate to cost, existing technology, logistics, and purpose and need.

Additional practicable measures have been included to avoid and minimize harm to wetlands and other waters of the United States as a result of the construction and operation of the identified preferred alternative (Alternative 9 Modified with the SJRB DV). These measures are:

- All permanent water quality treatment Best Management Practices (BMPs) were moved outside of jurisdictional areas.
- The project engineers reviewed and refined impact areas away from wetlands and other waters of the United States, to the best extent possible, with the exception of areas required to construct road and bridge facilities.
- Bridge piers were incorporated over drainages whenever possible instead of fill with culverts.
- Where culverts are required, they will use soft-bottom channels to the maximum extent possible.
- Retaining walls were incorporated to eliminate fill slopes near drainages whenever possible.

In addition to these avoidance and minimization measures, compensatory mitigation is also included in Alternative 9 Modified with the SJRB DV, as described earlier in Section 3.17.4.1, Compensatory Mitigation. Measures WET-1 through WET-4 also address project effects on waters of the United States.

Based on the above considerations, it was determined there is no practicable alternative to the proposed construction in wetlands under Alternative 9 Modified with the SJRB DV, and the proposed action includes all practicable measures to minimize harm to wetlands that may result from such use.

3.18.6 Avoidance, Minimization, and/or Mitigation Measures

Avoidance and minimization measures for USACE and CDFW jurisdictional waters are summarized above in Section 3.18.5, Wetlands Only Practicable Finding. Mitigation for impacts of the MCP project to wetlands and other waters will be achieved in accordance with the USACE and U.S. EPA Final Rule (33 Code of Federal Regulations [CFR] Parts 325 and 332 and 40 CFR Part 230, respectively) on Compensatory Mitigation for Losses of Aquatic Resources. A Habitat Mitigation and Monitoring Plan (HMMP) for USACE Jurisdictional Waters identifying mitigation ratios, locations, and performance standards for impacts to federal and State jurisdictional areas resulting from the preferred alternative (Alternative 9 Modified with the SJRB DV) is provided in Appendix P of this EIR/EIS.

WET-1 **Permanent Impacts to Jurisdictional Areas.** Prior to, during, and after construction, the Riverside County Transportation Commission (RCTC) shall mitigate permanent impacts to United States Army Corps of Engineers (USACE) jurisdictional wetlands and nonwetlands and California Department of Fish and Wildlife (CDFW) jurisdictional areas at a minimum replacement ratio of 2:1. The RCTC Project Manager will provide for mitigation to occur primarily through habitat restoration and/or enhancement of on-site areas along the length of the Mid County Parkway (MCP) to the extent practical. Alternatively, if it is infeasible to mitigate entirely on site, the RCTC Project Manager will coordinate with USACE and CDFW to provide off-site mitigation, such as enhancement, creation, and restoration. The Habitat Mitigation and Monitoring Plan (HMMP) for USACE Jurisdictional Waters (Appendix P in the Environmental Impact Report [EIR]/Environmental Impact Statement [EIS]) describes the approach and specific concepts for mitigation of impacts to waters of the United States and wetlands. This HMMP for USACE Jurisdictional Waters was prepared in coordination with the USACE, the United States Fish and Wildlife Service (USFWS) and the United States Environmental Protection Agency (USEPA). It is RCTC's intent that mitigation sites identified in the HMMP for USACE Jurisdictional Waters will also address project effects on State jurisdictional areas.

Additional mitigation, for impacts to resources covered under the Western Riverside County Multiple Species Habitat Conservation Plan (MSHCP), including riparian and riverine habitats under the jurisdiction of CDFW, will be provided in accordance with the Determination of Biologically Equivalent or Superior Preservation (DBESP) provided in Appendix T in the Final EIR/EIS. More detailed plans will be developed as more specific design and land acquisition information becomes available, and implemented through the USACE and CDFW permit/authorization processes.

The RCTC Project Manager will ensure that the mitigation implemented will comply with the federal policy of "no net loss" of wetlands. The RCTC Project Manager will ensure that a minimum of 1:1 replacement ratio will occur through establishment or reestablishment of both State and federal jurisdictional areas within the San Jacinto River watershed. This will mitigate for the replacement of area and function of both State and federal jurisdictional areas within the San Jacinto River watershed. Additional mitigation to achieve the remainder of the 2:1 mitigation ratio may occur outside of the San Jacinto River watershed.

WET-2 **Temporary Impacts to Jurisdictional Areas.** After the completion of construction in areas that resulted in temporary impacts to USACE and/or CDFW jurisdictional areas, the RCTC Resident Engineer will require the Construction Contractor to revegetate those on site areas at a minimum 1:1 replacement ratio. The revegation will be conducted as described in a future habitat mitigation program (as described in Measure WET-3) and in the applicable conditions from regulatory permits.

WET-3 **Habitat Mitigation Program.** The RCTC Project Manager will contract with a biologist (Project Biologist) to develop a comprehensive Habitat Mitigation Program to direct the restoration of temporarily impacted riparian habitats and other USACE and CDFW jurisdictional areas. The Habitat

Mitigation Program will incorporate the applicable approaches and measures identified in the Habitat Mitigation and Monitoring Plan for USACE Jurisdictional Waters (provided in Appendix P in the Final EIR/EIS) for impacts to USACE jurisdictional areas, as well as the necessary details for implementation of the measures described in the DBESPs included in the MSHCP Consistency Determination Including Determination of Biologically Equivalent or Superior Preservation Analysis MSHCP provided in Appendix T.

Measure WET-3 will be implemented in conjunction with Measures WET-1 and WET-2, above. Should an in-lieu fee program for mitigating impacts to waters of the United States be developed and become available within the San Jacinto River watershed with an appropriate service area that encompasses the MCP project area, the RCTC shall consult with the USACE and the USEPA to determine if a third-party mitigation option would be preferable rather than the permittee-responsible mitigation described in the HMMP for USACE Jurisdictional Waters.

WET-4 **Permits.** During final design, the RCTC Project Engineer will obtain the following permits in order to comply with Section 1600 of the Fish and Game Code and Sections 404 and 401 of the Clean Water Act. Any additional mitigation required by a regulatory agency beyond the measures outlined in WET-1 through WET-3 for purposes of compliance with California Environmental Quality Act (CEQA)/National Environmental Policy Act (NEPA) will be negotiated during the permit application and approval process. Those mitigation requirements will incorporate approaches and measures identified in the HMMP for USACE Jurisdictional Waters (provided in Appendix P in the EIR/EIS) and those described in Measures WET-1 through WET-3 above:

- A Section 404 permit from the USACE;
- A Section 1602 Agreement for Streambed Alteration from the CDFW; and
- A Section 401 water quality certification from the Santa Ana Regional Water Quality Control Board (RWQCB).

Mitigation ratios for the Section 404 permit will be finalized in coordination with the USACE using the most current version of the USACE South Pacific Division Regulatory Program Standard Operating Procedure for Determination of Mitigation Ratios.

If additional compensation for permanent or temporary impacts beyond the minimum replacement ratios described in WET-1 and WET-2 is required as a result of the approved permits, during final design and construction, the RCTC Project Manager would arrange for RCTC to provide that additional mitigation through purchase of mitigation bank credits for removal of invasive plants and restoration of riparian habitat from a location approved by the USACE and the CDFW under guidelines described by the resource and regulatory agencies through the permitting process, or through participation in another approved habitat mitigation bank. Any additional amount of mitigation will be determined in coordination with the resource and regulatory agencies based on the quality and quantity of jurisdictional resources to be affected with consideration of the results from the study entitled *Potential Impacts of Alternative Corridor Alignments to Waters of the United States, Riparian Ecosystems, and Threatened and Endangered Species: Mid County Parkway Project, Riverside County, California* (USACE Engineer Research and Development Center, Smith 2011).